

## UNITED STATES AIR FORCE RESEARCH LABORATORY

### TRANSMISSIVITY AND NIGHT VISION GOGGLE COMPATIBILITY DATA FOR SELECT AIRCRAFT TRANSPARENCIES

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### FOR THE COMMANDER

  
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Air Force Research Laboratory

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This document is a compilation of spectral transmissivity data measured from numerous aircraft transparencies. The spectral transmissivity of each part was measured from wavelengths of 450 nm through 950 nm. Some parts were also measured at several different angles relative to the optical axis of the spectroradiometric instrument. The measurements yielded both visible light and near infrared (NIR) spectra. The NIR data were used to calculate night vision goggle-weighted transmissivity (TNVG) values (Pinkus and Task, 1997). TNVG is a measure of a transparency's compatibility when it is used in conjunction with night vision goggles (NVGs). NVGs utilize the NIR portion (600 nm through 950 nm) of the night sky ambient illumination. Generally speaking, the higher the TNVG coefficient, the higher the NVG visual performance (Pinkus & Task, 1998a; Pinkus & Task, 1997).			
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## TABLE of CONTENTS

INTRODUCTION .....	1
DOCUMENT STRUCTURE.....	1
Aircraft Transparency Profile	
Transmissivity Graph	
Tabular Data	
AIR FORCE AIRCRAFT .....	3
BOMBERS .....	4
B1-B (Sierracin, right side, polycarbonate/silicone, tempered glass/layered, normal, $T_{NVG} = 75\%$ ) .....	5
B1-B (Sierracin, right side, polycarbonate/silicone, tempered glass/layered, design eye, $T_{NVG} = 56\%$ ).....	9
B-52 (normal, $T_{NVG} = 70\%$ ).....	12
CARGO .....	16
C-130 (normal, $T_{NVG} = 63\%$ ).....	17
C-130 (design eye, $T_{NVG} = 39\%$ ) .....	21
FIGHTERS/FIGHTER BOMBERS .....	24
F-15 (stretched acrylic, normal, $T_{NVG} = 87\%$ ).....	25
F-15 (stretched acrylic, design eye, $T_{NVG} = 78\%$ ) .....	29
F-15 (Sierracin, inclusions, normal, $T_{NVG} = 88\%$ ) .....	32
F-15 (Sierracin, inclusions, design eye, $T_{NVG} = 78\%$ ).....	36
F-15 (Pilkington, acrylic, normal, $T_{NVG} = 90\%$ ).....	39
F-15 (Pilkington, acrylic, design eye, $T_{NVG} = 78\%$ ).....	43
F-15 (Swedlow, single seat, stretched acrylic, normal, $T_{NVG} = 89\%$ ) .....	46
F-15 (Swedlow, dual seat, normal, $T_{NVG} = 89\%$ ) .....	50
F-16 (Texstars, A/C, normal, $T_{NVG} = 90\%$ ) .....	54
F-16 (Texstars, A/C, design eye, $T_{NVG} = 78\%$ ) .....	58
F-16 (Texstars, gold coat, normal, $T_{NVG} = 58\%$ ).....	61
F-16 (Sierracin, A/B, clear coat, acrylic/silicone/polycarbonate, normal, $T_{NVG} = 91\%$ ) .....	65
F-16 (Sierracin, A/B, clear coat, acrylic/silicone/polycarbonate, design eye, $T_{NVG} = 78\%$ ) .....	69
F-16 (Sierracin, B/D, gold coat, normal, $T_{NVG} = 57\%$ ) .....	72
F-16 (Sierracin, B/D, gold coat, design eye, $T_{NVG} = 41\%$ ).....	76
F-16 (Texstars, A/C, left side, gold coat, 2-3 ply polycarbonate, normal, $T_{NVG} = 82\%$ ) .....	79
F-16 (Texstars, A/C, left side, gold coat, normal, $T_{NVG} = 90\%$ ) .....	83
F-16 (Texstars, A/D, CFWD, non-solar, normal, $T_{NVG} = 90\%$ ) .....	87

F-16 (Texstars, A/D, CFWD, non-solar, design eye, $T_{NVG} = 80\%$ ) .....	91
F-16 (Sierracin, A/C, left side, clear coat, normal, $T_{NVG} = 89\%$ ).....	94
F-16 (Texstars, A/D, CFWD, solar, normal, $T_{NVG} = 90\%$ ) .....	98
F-16 (Texstars, A/D, CFWD, solar, design eye, $T_{NVG} = 75\%$ ).....	102
F-16 (Sierracin, A/C, left side, gold coat, normal, $T_{NVG} = 58\%$ ) .....	105
F-111 (Sierracin, acrylic, polycarbonate/layered, normal, $T_{NVG} = 81\%$ ) .....	109
F-111 (Sierracin, acrylic, polycarbonate/layered, design eye, $T_{NVG} = 62\%$ ).....	113
<b>TRAINER .....</b>	<b>116</b>
T-38/F-5 (PPG, acrylic/monolith, normal, $T_{NVG} = 89\%$ ) .....	117
T-38/F-5 (PPG, normal, $T_{NVG} = 91\%$ ).....	121
T-38/F-5 (PPG, design eye, $T_{NVG} = 78\%$ ) .....	125
T-38/F-5 (Swedlow, normal, $T_{NVG} = 89\%$ ) .....	128
T-38/F-5 (Swedlow, design eye, $T_{NVG} = 66\%$ ).....	132
T-38/F-5 (PPG, self-healing, normal, $T_{NVG} = 85\%$ ) .....	135
T-38/F-5 (PPG, self-healing, design eye, $T_{NVG} = 68\%$ ) .....	139
<b>NAVY FIGHTER .....</b>	<b>142</b>
F-18 (Sierracin, ITO, S243 process coating, normal, $T_{NVG} = 81\%$ ) .....	143
F-18 (Sierracin, ITO, S243 process coating, design eye, $T_{NVG} = 68\%$ ) .....	147
F-18 (Sierracin, ITO, S243 process coating, normal, $T_{NVG} = 80\%$ ) .....	150
F-18 (Sierracin, ITO, S243 process coating, design eye, $T_{NVG} = 68\%$ ) .....	154
F-18 (Sierracin, ITO, S243 process coating, normal, $T_{NVG} = 82\%$ ) .....	157
F-18 (Sierracin, ITO, S243 process coating, design eye, $T_{NVG} = 68\%$ ) .....	161
F-18 (Swedlow, night attack, acrylic, normal, $T_{NVG} = 82\%$ ).....	164
F-18 (Swedlow, night attack, acrylic, design eye, $T_{NVG} = 65\%$ ).....	168
F-18 (Swedlow, night attack, acrylic, normal, $T_{NVG} = 80\%$ ).....	171
F-18 (Swedlow, night attack, acrylic, design eye, $T_{NVG} = 65\%$ ).....	175
F-18 (Swedlow, normal, $T_{NVG} = 89\%$ ) .....	178
F-18 (Swedlow, design eye, $T_{NVG} = 75\%$ ).....	182
F-18 (Swedlow, single seat, canopy 'A', normal, $T_{NVG} = 86\%$ ) .....	185
F-18 (Swedlow, rear canopy, acrylic, normal, $T_{NVG} = 89\%$ ).....	189
F-18 (Llamas, normal, $T_{NVG} = 91\%$ ) .....	193
F-18 (Llamas, design eye, $T_{NVG} = 76\%$ ) .....	197
<b>PROTOTYPES .....</b>	<b>200</b>
Next Generation Transparency (OEP-34D, normal, $T_{NVG} = 74\%$ ).....	201
Next Generation Transparency (normal, OEP-54D, $T_{NVG} = 74\%$ ).....	205
Prototype windscreen (Boeing, injection-molded, normal, $T_{NVG} = 84\%$ ) .....	209
<b>COUPONS/PLASTIC SAMPLES .....</b>	<b>213</b>
Coupon (Pilkington, solar, gold coat, @ 20 deg, $T_{NVG} = 77\%$ ).....	214
Coupon (Sierracin, solar, gold coat, @ 20 deg, $T_{NVG} = 82\%$ ) .....	218
Coupon (Texstars, solar, gold coat, @ 20 deg, $T_{NVG} = 64\%$ ).....	222
Coupon (Pilkington, solar, gold coat, @ 25 deg, $T_{NVG} = 77\%$ ).....	226

Coupon (Sierracin, solar, gold coat, @ 25 deg, $T_{NVG} = 81\%$ ) .....	230
Coupon (Texstars, solar, gold coat, @ 25 deg, $T_{NVG} = 63\%$ ) .....	234
Coupon (Pilkington, solar, gold coat, @ 40 deg, $T_{NVG} = 74\%$ ) .....	238
Coupon (Sierracin, solar, gold coat, @ 40 deg, $T_{NVG} = 78\%$ ) .....	242
Coupon (Texstars, solar, gold coat, @ 40 deg, $T_{NVG} = 61\%$ ) .....	246
Coupon (Pilkington, solar, gold coat, @ 45 deg, $T_{NVG} = 73\%$ ) .....	250
Coupon (Sierracin, solar, gold coat, @ 45 deg, $T_{NVG} = 76\%$ ) .....	254
Coupon (Texstars, solar, gold coat, @ 45 deg, $T_{NVG} = 59\%$ ) .....	258
Coupon (Pilkington, solar, gold coat, @ 60 deg, $T_{NVG} = 65\%$ ) .....	262
Coupon (Sierracin, solar, gold coat, @ 60 deg, $T_{NVG} = 66\%$ ) .....	266
Coupon (Texstars, solar, gold coat, @ 60 deg, $T_{NVG} = 53\%$ ) .....	270
Coupon (Pilkington, solar, gold coat, @ 65 deg, $T_{NVG} = 60\%$ ) .....	274
Coupon (Sierracin, solar, gold coat, @ 65 deg, $T_{NVG} = 59\%$ ) .....	278
Coupon (Texstars, solar, gold coat, @ 65 deg, $T_{NVG} = 49\%$ ) .....	282
Coupon (Pilkington, solar, gold coat, normal, $T_{NVG} = 75\%$ ) .....	286
Coupon (Sierracin, solar, gold coat, normal, $T_{NVG} = 82\%$ ) .....	290
Coupon (Texstars, solar, gold coat, normal, $T_{NVG} = 62\%$ ) .....	294
Coupon (Pilkington, gold coat, @ 34 deg design eye, $T_{NVG} = 70\%$ ) .....	298
Coupon (Sierracin, gold coat, @ 34 deg design eye, $T_{NVG} = 53\%$ ) .....	302
Coupon (Texstars, gold coat, @ 34 deg design eye, $T_{NVG} = 59\%$ ) .....	306
Coupon (Texstars, gold coat, $T_{NVG} = 63\%$ ) .....	310
Coupon (Sierracin, gold coat, normal, $T_{NVG} = 55\%$ ) .....	314
Coupon (Sierracin, gold wire mesh, normal, $T_{NVG} = 77\%$ ) .....	318
Plastic sample (F-111, non-coated, normal, $T_{NVG} = 85\%$ ) .....	322
Plastic Sample (Gold, acrylic, laminated, normal, $T_{NVG} = 51\%$ ) .....	326
Plastic Sample (3mm, ACT3, mono, normal, $T_{NVG} = 71\%$ ) .....	330
Plastic Sample (6mm, ACT3, mono, normal, $T_{NVG} = 70\%$ ) .....	334
Plastic Sample (10mm, ACT3, mono, normal, $T_{NVG} = 70\%$ ) .....	338
Plastic Sample (3mm, acrylic, normal, $T_{NVG} = 82\%$ ) .....	342
Plastic Sample (5mm, acrylic, normal, $T_{NVG} = 83\%$ ) .....	346
Plastic Sample (9mm, acrylic, normal, $T_{NVG} = 82\%$ ) .....	350
 REFERENCES .....	354
 APPENDIX A	
The Effects of Aircraft Transparencies on Night Vision Goggle-Mediated Visual Acuity (Pinkus and Task, 1997) .....	355

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## INTRODUCTION

The Visual Image Evaluation of Windscreens (VIEW) facility at Wright-Patterson AFB, Ohio, has been evaluating the optical characteristics of aircraft transparencies (Merkel & Task 1989; Muick, 1978) for over twenty-five years. During this time period, numerous types of aircraft transparencies from different sources have been measured for a multitude of optical characteristics. Some of these optical characteristics include angular deviation, multiple imaging, distortion, haze, and transmissivity. Though continuous in nature, transmissivity characteristics can be divided into two spectral ranges: visible and near infrared (NIR). Unaided human vision is sensitive to light from about 400 nm (blue) to 700 nm (red) with peak sensitivity occurring at about 555 nm (green). In comparison to human vision, the night vision goggles (NVGs) that are used in aircraft cockpits are sensitive to and amplify light in the red and NIR region of the spectrum from about 600 nm to 950 nm. This data compilation provides detailed information on the visible and NIR transmissivity characteristics of transparent plastics. These data allow human factors engineers and vision scientists to assess the relative visual impact that different types of transparencies may have on both unaided and NVG-supplemented aircrew out-of-the-cockpit visual performance. The NIR data also can be used to resolve NVG/transparency integration issues.

The American Society for Testing and Materials (ASTM) has published several standardized test methods (ASTM D 1003-97; ASTM F 1316-90) for measuring the transmissivity of transparent parts in the visible region. ASTM D 1003-97 is utilized when measuring thin, flat parts perpendicular to the optical axis whereas ASTM F 1316-90 is applied when measuring large, curved or installed parts. These standard test methods include precision statements for reproducibility (between-laboratory variability) and repeatability (within-laboratory variability) (ASTM E 691-99).

Transparencies can have high transmissivity in the visible region but attenuate NIR. The result is a transparency exhibiting good out-of-the-cockpit visibility for the unaided eye but marginal or poor NVG-aided visual performance. Thus, an analytical method was devised to measure a transparency's NVG-weighted transmissivity or  $T_{NVG}$  (Pinkus and Task, 1997).  $T_{NVG}$  is an indicator of a given transparency's compatibility with NVGs. ASTM has also published a standardized test method (ASTM F 1863-98) for the determination of  $T_{NVG}$  of a transparent part. This standard test method also includes reproducibility and repeatability precision statements (ASTM E 691-99).

## DOCUMENT STRUCTURE

This document is sub-divided into different sections containing transmissivity data for: USAF bombers, cargo aircraft, fighters, trainers, some Navy aircraft, prototype transparencies,

plastic coupons and samples. Each sub-section contains an aircraft transparency profile, a transmissivity graph and its associated tabular data. Some parts were measured at both normal and installed (design eye) angles. Also included in this reference is a reprint of a paper by Pinkus and Task (1997), which provides the theoretical basis of the  $T_{NVG}$  calculation that is used throughout this reference.

### Aircraft Transparency Profile

The aircraft transparency profile page contains the following information: aircraft type, part name, date of manufacture, serial number, material type, construction and coating. Some profiles are incomplete because the information was not available at the time of the measurement.

### Transmissivity Graph

This graphic shows the transmissivity coefficient plotted as a function of wavelength from 450 nm to 950 nm as measured using an EG&G Gamma Scientific Radoma Model GS-1252-01 spectroradiometer. The graph is labeled with information including aircraft type, material, serial number, measurement geometry (normal means perpendicular to the surface of the transparency) and the  $T_{NVG}$  coefficient. For visible light, the transmissivity of a transparency is often expressed as a simple percentage (Fischer and Tadic-Galeb, 2000). The graph plots the transmission coefficient (or simply transmissivity) as a function of wavelength, where a transmission coefficient of 1.0 equals 100% transmission.

### Tabular Data

This section contains the tabular data used to plot the transmissivity graph and calculate the  $T_{NVG}$  coefficient (Pinkus and Task, 1997 & 1998b). The tabular data are included to facilitate additional analyses by the reader.

## **AIR FORCE AIRCRAFT**

## **BOMBERS**

## **B1-B**

**Aircraft:** B1-B (Right Side)

**Part Name:** Windscreen, SIERRACIN

**Manufactured:** 9/28/84

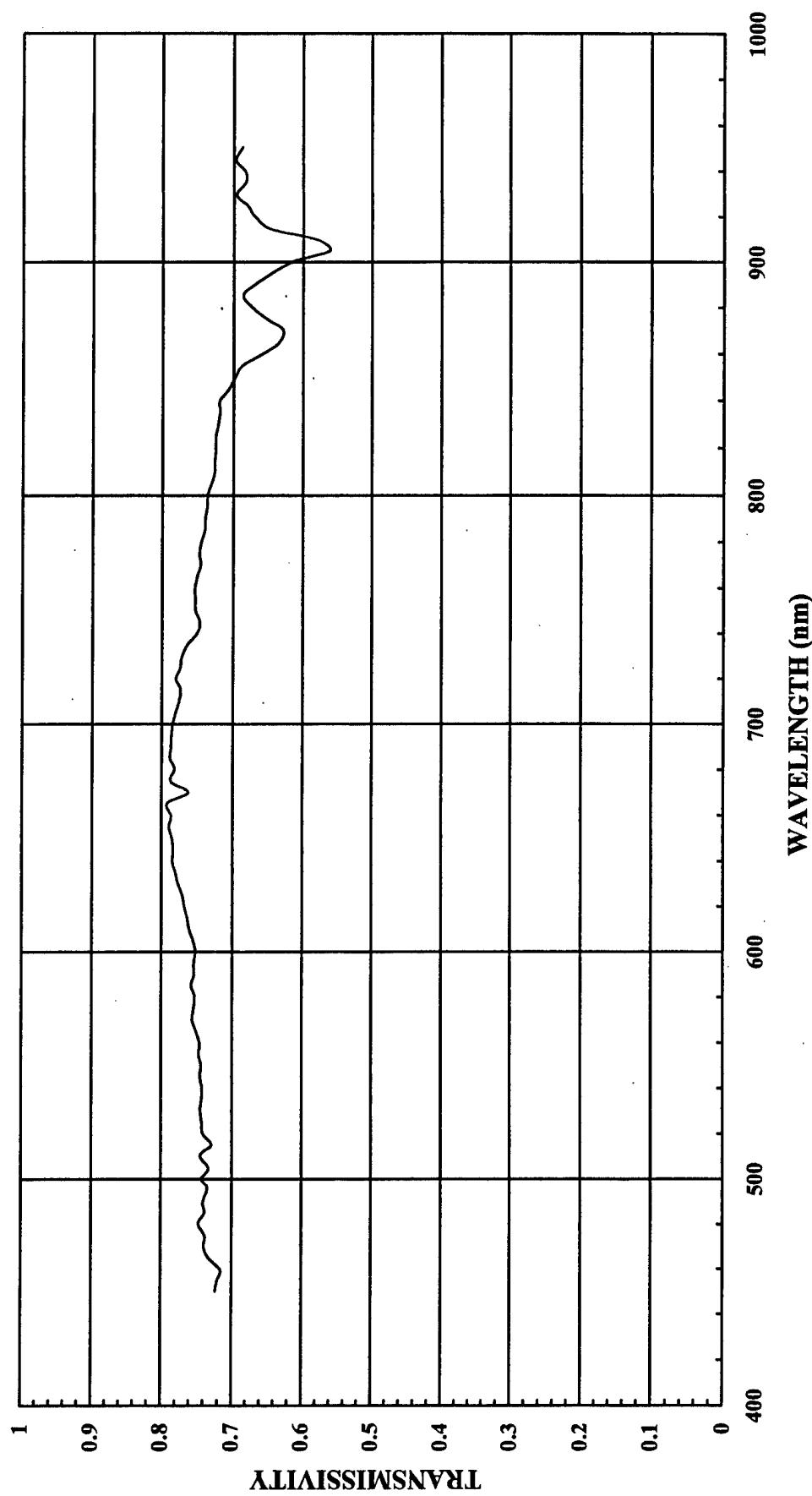
**S/N#** 0016

**Material Type:** Polycarbonate and silicone

**Construction:** Tempered glass and layered

**Coating:** N/A

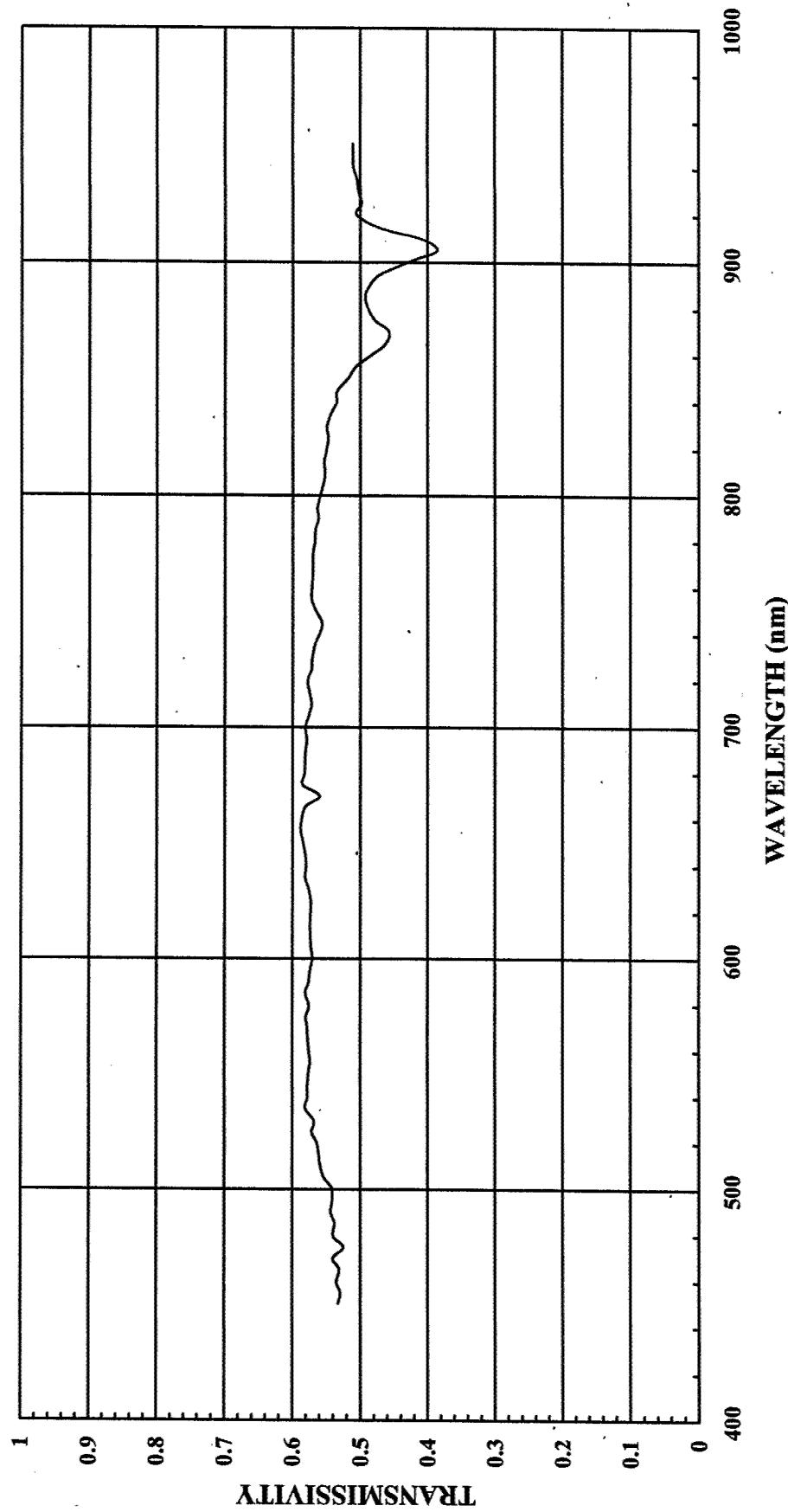
B1-B (SIERRACIN, RIGHT SIDE, S/N# 0016, TEMPERED GLASS, LAYERED  
POLYCARBONATE AND SILICONE, MFG. 9/28/94) @ NORMAL  
 $T_{vug} = 75\%$



<u>B1-B, RIGHT SIDE, SIERRACIN, S/N# 0016, TEMPERED GLASS, LAYERED POLYCARB &amp; SILICONE @ NORMAL</u>			
WAVELENGTH(nm)	SPECTRA- RADIOMETRIC READING	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
450	0.7232558	0.0001	7.23256E-05
455	0.7206823	0.0001125	8.10768E-05
460	0.7162427	0.000123	8.80979E-05
465	0.7333333	0.0001375	0.000100833
470	0.7392087	0.00015	0.000110881
475	0.7380137	0.00016172	0.000119352
480	0.7471265	0.000175	0.000130747
485	0.7385103	0.00019375	0.000143086
490	0.740413	0.0002125	0.000157338
496	0.7343324	0.00022266	0.000163506
500	0.7429341	0.0002375	0.000176447
505	0.73297	0.00027656	0.00020271
510	0.7446808	0.0003125	0.000232713
515	0.729064	0.00034279	0.000249916
520	0.7408257	0.000375	0.00027781
525	0.7425414	0.00041875	0.000310939
530	0.744657	0.0004625	0.000344404
535	0.7432736	0.00050703	0.000376862
540	0.7424569	0.00055	0.000408351
545	0.7449393	0.00058359	0.000434739
550	0.7438905	0.000625	0.000464932
555	0.7471374	0.0007	0.000522996
560	0.7458256	0.000775	0.000578015
565	0.7511231	0.00085	0.000638455
570	0.7560764	0.000925	0.000699371
575	0.7546531	0.0014525	0.001096134
580	0.7527334	0.00198	0.001490412
585	0.7579035	0.0047175	0.00357541
590	0.7539936	0.0078	0.00588115
595	0.75432	0.0114	0.008599248
600	0.7519164	0.015	0.011278746
605	0.755102	0.026263	0.019831244
610	0.7605537	0.052	0.039548792
615	0.7640288	0.088388	0.067530978
620	0.7682021	0.175	0.134435368
625	0.7705404	0.43288	0.333551528
630	0.777217	0.6138	0.477055795
635	0.7807263	0.67756	0.528988912
640	0.7847929	0.7448	0.584513752
645	0.784	0.82458	0.64647072
650	0.7856669	0.8897	0.699007841
655	0.7896461	0.89654	0.707949314
660	0.7866109	0.9034	0.710624287
665	0.7919514	0.91051	0.721079669
670	0.7621621	0.9172	0.699055078
675	0.787324	0.92241	0.726235531
680	0.7822165	0.9276	0.725584025
685	0.7885305	0.93254	0.735336232
690	0.7871033	0.9379	0.738224185
695	0.7868112	0.9448	0.743379222
700	0.7846889	0.9517	0.746788426
705	0.7812269	0.9586	0.748884106
710	0.776544	0.9655	0.749753232
715	0.7742146	0.97304	0.753341774
720	0.7808306	0.9793	0.764667407
725	0.774398	0.9802	0.75906492
730	0.7726398	0.9828	0.759350395

735	0.7643641	0.98838	0.755482189
740	0.7513298	0.9931	0.746145624
745	0.7472021	0.99719	0.745102462
750	0.7530236	1	0.7530236
755	0.7531018	1	0.7531018
760	0.7539586	1	0.7539586
765	0.7505952	1	0.7505952
770	0.7458234	1	0.7458234
775	0.7477092	0.99814	0.746318461
780	0.7455471	0.9966	0.74301224
785	0.7402423	0.99543	0.736859393
790	0.7397454	0.9945	0.7356768
795	0.7370371	0.9938	0.73246747
800	0.7364341	0.9931	0.731352705
805	0.7310126	0.9862	0.720924626
810	0.7266245	0.9793	0.711583373
815	0.7262984	0.97283	0.706564872
820	0.7251462	0.9655	0.700128656
825	0.7253401	0.95515	0.692808597
830	0.7223183	0.9448	0.68244633
835	0.7194245	0.93402	0.671956871
840	0.7197751	0.9241	0.66514417
845	0.7073643	0.9172	0.648794536
850	0.6974359	0.9103	0.6348759
855	0.6873661	0.86334	0.593430649
860	0.6595982	0.8	0.52767856
865	0.6356132	0.72848	0.463031504
870	0.6288533	0.6552	0.412024682
875	0.6520051	0.58016	0.378267279
880	0.6721311	0.5034	0.338350796
885	0.6864785	0.42523	0.291911253
890	0.6703125	0.3448	0.23112375
895	0.6468648	0.25704	0.166270128
900	0.6130742	0.175	0.107287985
905	0.5618182	0.11009	0.061850566
910	0.5795454	0.0621	0.035989769
915	0.6468254	0.043125	0.027894345
920	0.6701245	0.0276	0.018495436
925	0.6803455	0.015525	0.010562364
930	0.6963471	0.0069	0.004804795
935	0.6825776	0	0
940	0.683417	0	0
945	0.6968085	0	0
950	0.6873239	0	0
<b>SUM</b>		36.29238147	
<b>T<sub>nv</sub>g(SUM/NVG)</b>		0.745246073	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

B1-B (RIGHT SIDE, SIERRACIN, S/N# 0016, TEMPERED GLASS, LAYERED  
POLYCARBONATE AND SILICONE, MFG. 9/28/84) @ DESIGN EYE  
 $T_{avg} = 56\%$



<b>B1-B, RIGHT SIDE, SIERRACIN, S/N# 0016, TEMPERED GLASS, LAYERED POLYCARB &amp; SILICONE @ DESIGN EYE</b>			
	<b>SPECTRA- RADIOMETRIC</b>	<b>RELATIVE SPECTRAL SENSITIVITY</b>	<b>NVG SPECTRAL RESPONSE</b>
<b>WAVELENGTH(nm)</b>	<b>READING</b>	<b>"NVIS A"</b>	
450	0.5325581	0.0001	5.32558E-05
455	0.5292842	0.0001125	5.95445E-05
460	0.5349302	0.000123	6.57964E-05
465	0.5308411	0.0001375	7.29907E-05
470	0.5404412	0.00015	8.10662E-05
475	0.5248713	0.00016172	8.48822E-05
480	0.54	0.000175	0.0000945
485	0.5377207	0.00019375	0.000104183
490	0.5435435	0.0002125	0.000115503
495	0.5414909	0.00022266	0.000120568
500	0.5414966	0.0002375	0.000128605
505	0.5532504	0.00027656	0.000153007
510	0.5584239	0.0003125	0.000174507
515	0.56125	0.00034279	0.000192391
520	0.5640138	0.000375	0.000211505
525	0.5714285	0.00041875	0.000239286
530	0.5681818	0.0004625	0.000262784
535	0.5811578	0.00050703	0.000294664
540	0.577511	0.00055	0.000317631
545	0.5779626	0.00058359	0.000337293
550	0.5762376	0.000625	0.000360149
555	0.573913	0.0007	0.000401739
560	0.5755868	0.000775	0.00044608
565	0.5771325	0.00085	0.000490563
570	0.5779334	0.000925	0.000534588
575	0.58012	0.0014525	0.000842624
580	0.5755517	0.00198	0.001139592
585	0.5806723	0.0047175	0.002739322
590	0.5758064	0.0078	0.00449129
595	0.5742424	0.0114	0.006546363
600	0.5708245	0.015	0.008562368
605	0.5728022	0.026263	0.015043504
610	0.5737135	0.052	0.029833102
615	0.5740072	0.088388	0.050735348
620	0.5731344	0.175	0.10029852
625	0.5727069	0.43288	0.247913363
630	0.5756241	0.6138	0.353318073
635	0.5812147	0.67756	0.393807832
640	0.5795611	0.7448	0.431657107
645	0.5810356	0.82458	0.479110335
650	0.5844504	0.8897	0.519985521
655	0.5876902	0.89654	0.526887772
660	0.5867419	0.9034	0.530062632
665	0.580916	0.91051	0.528929827
670	0.5597826	0.9172	0.513432601
675	0.5848787	0.92241	0.539497962
680	0.5823755	0.9276	0.540211514
685	0.5811138	0.93254	0.541911863
690	0.5809129	0.9379	0.544838209
695	0.5789954	0.9448	0.547034854
700	0.5809831	0.9517	0.552921616
705	0.5761194	0.9586	0.552268057

710	0.572028	0.9655	0.552293034
715	0.5746667	0.97304	0.559173686
720	0.5775194	0.9793	0.565564748
725	0.5720663	0.9802	0.560739387
730	0.5709677	0.9828	0.561147056
735	0.5675324	0.98838	0.560937674
740	0.5607476	0.9931	0.556878442
745	0.5563661	0.99719	0.554802711
750	0.5660498	1	0.5660498
755	0.5720552	1	0.5720552
760	0.5716034	1	0.5716034
765	0.5703971	1	0.5703971
770	0.569886	1	0.569886
775	0.5701107	0.99814	0.569050294
780	0.5671546	0.9966	0.565226274
785	0.5664194	0.99543	0.563830863
790	0.5617898	0.9945	0.558699956
795	0.5634744	0.9938	0.559980859
800	0.5590062	0.9931	0.555149057
805	0.5546688	0.9862	0.547014371
810	0.5522745	0.9793	0.540842418
815	0.5534383	0.97283	0.538401381
820	0.5495798	0.9655	0.530619297
825	0.5472341	0.95515	0.522690651
830	0.5491732	0.9448	0.518858839
835	0.5433213	0.93402	0.507472961
840	0.5347092	0.9241	0.494124772
845	0.5341797	0.9172	0.489949621
850	0.5174897	0.9103	0.471070874
855	0.5070118	0.86334	0.437723567
860	0.485426	0.8	0.3883408
865	0.4639905	0.72848	0.338007799
870	0.4571428	0.6552	0.299519963
875	0.4776903	0.58016	0.277136804
880	0.4876713	0.5034	0.245493732
885	0.4927114	0.42523	0.209515669
890	0.4865719	0.3448	0.167769991
895	0.4700997	0.25704	0.120834427
900	0.4260564	0.175	0.07455987
905	0.3853211	0.11009	0.04242
910	0.407197	0.0621	0.025286934
915	0.4702381	0.043125	0.020279018
920	0.5052631	0.0276	0.013945262
925	0.4978261	0.015525	0.00772875
930	0.5022935	0.0069	0.003465825
935	0.5048544	0	0
940	0.51	0	0
945	0.5105264	0	0
950	0.5112994	0	0
<b>SUM:</b>		27.09595739	
<b>T<sub>nv</sub>g (SUM/NVG):</b>		0.556402061	(SPECTRAL TRANSMISSION COEFFICIENT)

# **B-52**

**Aircraft:** B-52

**Part Name:** Windscreen

**Manufactured:** N/A

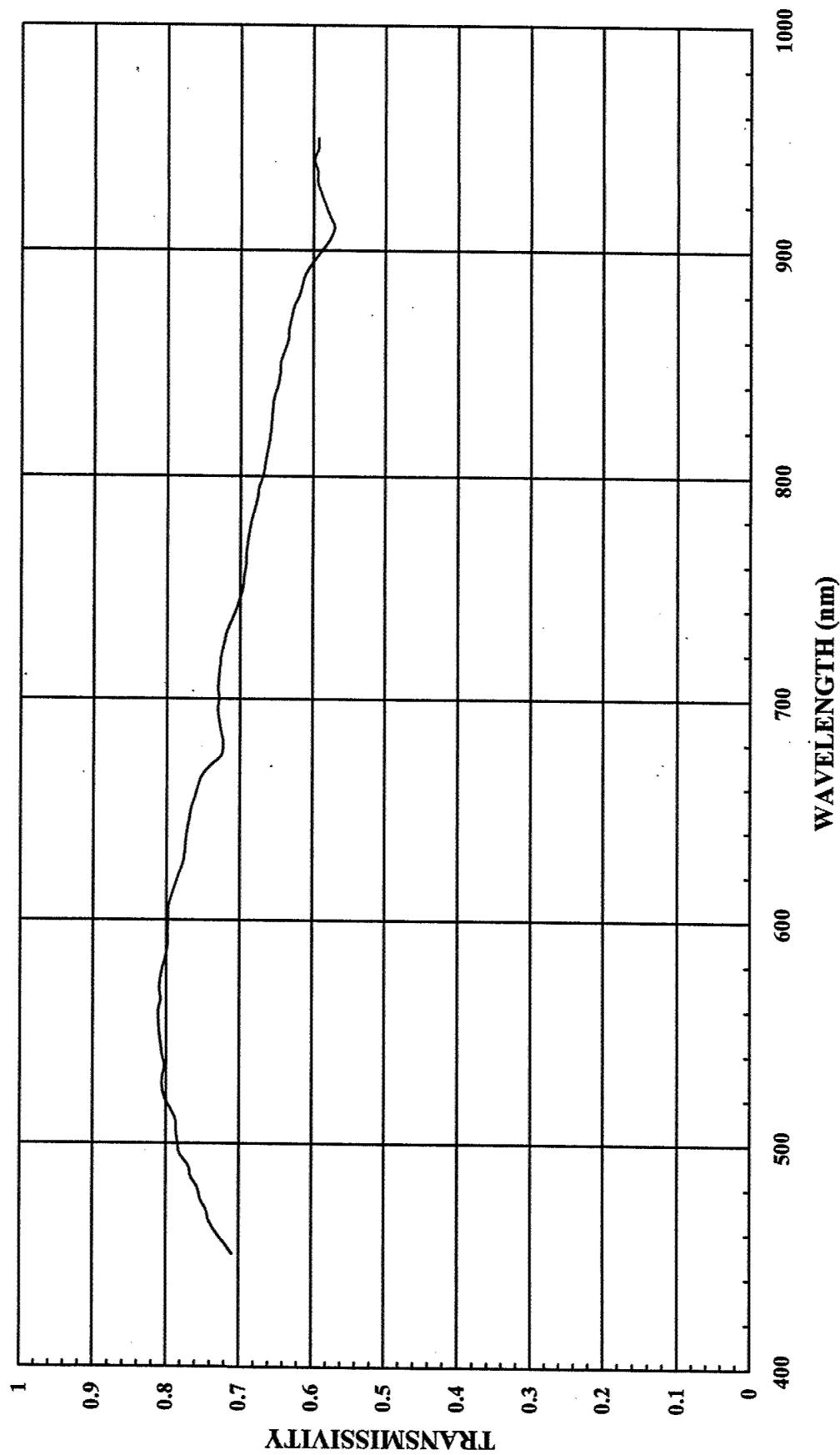
**S/N#** 5-52093-3

**Material Type:** N/A

**Construction:** N/A

**Coating:** N/A

B-52 WINDSCREEN (S/N#5-52093-3) @ NORMAL  
 $T_{avg} = 70\%$



<u>B-52, S/N# 5-52093-3, @ NORMAL</u>			
WAVELENGTH(nm)	<u>SPECTRA- RADIOMETRIC</u>	<u>RELATIVE SPECTRAL SENSITIVITY</u>	<u>NVG SPECTRAL RESPONSE</u>
	<u>READING</u>	<u>"NVIS A"</u>	
450	0.709452	0.0001	7.09E-05
455	0.719723	0.0001125	8.10E-05
460	0.731025	0.000123	8.99E-05
465	0.741459	0.0001375	1.02E-04
470	0.745011	0.00015	1.12E-04
475	0.752534	0.00016172	1.22E-04
480	0.757062	0.000175	1.32E-04
485	0.765762	0.00019375	1.48E-04
490	0.769121	0.0002125	1.63E-04
495	0.781153	0.00022266	1.74E-04
500	0.78369	0.0002375	1.86E-04
505	0.785714	0.00027656	2.17E-04
510	0.78702	0.0003125	2.46E-04
515	0.793434	0.00034279	2.72E-04
520	0.801391	0.000375	3.01E-04
525	0.805307	0.00041875	3.37E-04
530	0.805532	0.0004625	3.73E-04
535	0.802589	0.00050703	4.07E-04
540	0.805577	0.00055	4.43E-04
545	0.807897	0.00058359	4.71E-04
550	0.810019	0.000625	5.06E-04
555	0.810629	0.0007	5.67E-04
560	0.811006	0.000775	6.29E-04
565	0.807895	0.00085	6.87E-04
570	0.809924	0.000925	7.49E-04
575	0.807792	0.0014525	1.17E-03
580	0.804684	0.00198	1.59E-03
585	0.800547	0.0047175	3.78E-03
590	0.798052	0.0078	6.22E-03
595	0.798445	0.0114	9.10E-03
600	0.79756	0.015	1.20E-02
605	0.797866	0.026263	2.10E-02
610	0.794039	0.052	4.13E-02
615	0.789505	0.088388	6.98E-02
620	0.783679	0.175	1.37E-01
625	0.778111	0.43288	3.37E-01
630	0.775279	0.6138	4.76E-01
635	0.773702	0.67756	5.24E-01
640	0.771978	0.7448	5.75E-01
645	0.769629	0.82458	6.35E-01
650	0.766592	0.8897	6.82E-01
655	0.762019	0.89654	6.83E-01
660	0.757782	0.9034	6.85E-01
665	0.75182	0.91051	6.85E-01
670	0.739726	0.9172	6.78E-01
675	0.725348	0.92241	6.69E-01
680	0.722917	0.9276	6.71E-01
685	0.725789	0.93254	6.77E-01
690	0.728442	0.9379	6.83E-01
695	0.73064	0.9448	6.90E-01
700	0.729138	0.9517	6.94E-01

705	0.72998	0.9586	7.00E-01
710	0.72892	0.9655	7.04E-01
715	0.727208	0.97304	7.08E-01
720	0.725657	0.9793	7.11E-01
725	0.721474	0.9802	7.07E-01
730	0.718047	0.9828	7.06E-01
735	0.712386	0.98838	7.04E-01
740	0.705502	0.9931	7.01E-01
745	0.700892	0.99719	6.99E-01
750	0.696792	1	6.97E-01
755	0.69504	1	6.95E-01
760	0.6925	1	6.93E-01
765	0.692174	1	6.92E-01
770	0.690443	1	6.90E-01
775	0.687937	0.99814	6.87E-01
780	0.685185	0.9966	6.83E-01
785	0.680508	0.99543	6.77E-01
790	0.676803	0.9945	6.73E-01
795	0.675012	0.9938	6.71E-01
800	0.669481	0.9931	6.65E-01
805	0.666912	0.9862	6.58E-01
810	0.664291	0.9793	6.51E-01
815	0.66107	0.97283	6.43E-01
820	0.658954	0.9655	6.36E-01
825	0.657711	0.95515	6.28E-01
830	0.65645	0.9448	6.20E-01
835	0.654278	0.93402	6.11E-01
840	0.649463	0.9241	6.00E-01
845	0.646015	0.9172	5.93E-01
850	0.645619	0.9103	5.88E-01
855	0.640719	0.86334	5.53E-01
860	0.634954	0.8	5.08E-01
865	0.633982	0.72848	4.62E-01
870	0.630657	0.6552	4.13E-01
875	0.626228	0.58016	3.63E-01
880	0.619252	0.5034	3.12E-01
885	0.61526	0.42523	2.62E-01
890	0.610549	0.3448	2.11E-01
895	0.599553	0.25704	1.54E-01
900	0.588374	0.175	1.03E-01
905	0.577922	0.11009	6.36E-02
910	0.570971	0.0621	3.55E-02
915	0.576729	0.043125	2.49E-02
920	0.582645	0.0276	1.61E-02
925	0.588861	0.015525	9.14E-03
930	0.594079	0.0069	4.10E-03
935	0.593814	0	0.00E+00
940	0.598689	0	0.00E+00
945	0.592961	0	0.00E+00
950	0.592742	0	0.00E+00
<b>SUM:</b>		33.93599854	
<b>Tnvg(SUM/NVG):</b>		0.696858917	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

## **CARGO**

# **C - 130**

**Aircraft:** C - 130

**Part Name:** Windscreen

**Manufactured:** N/A

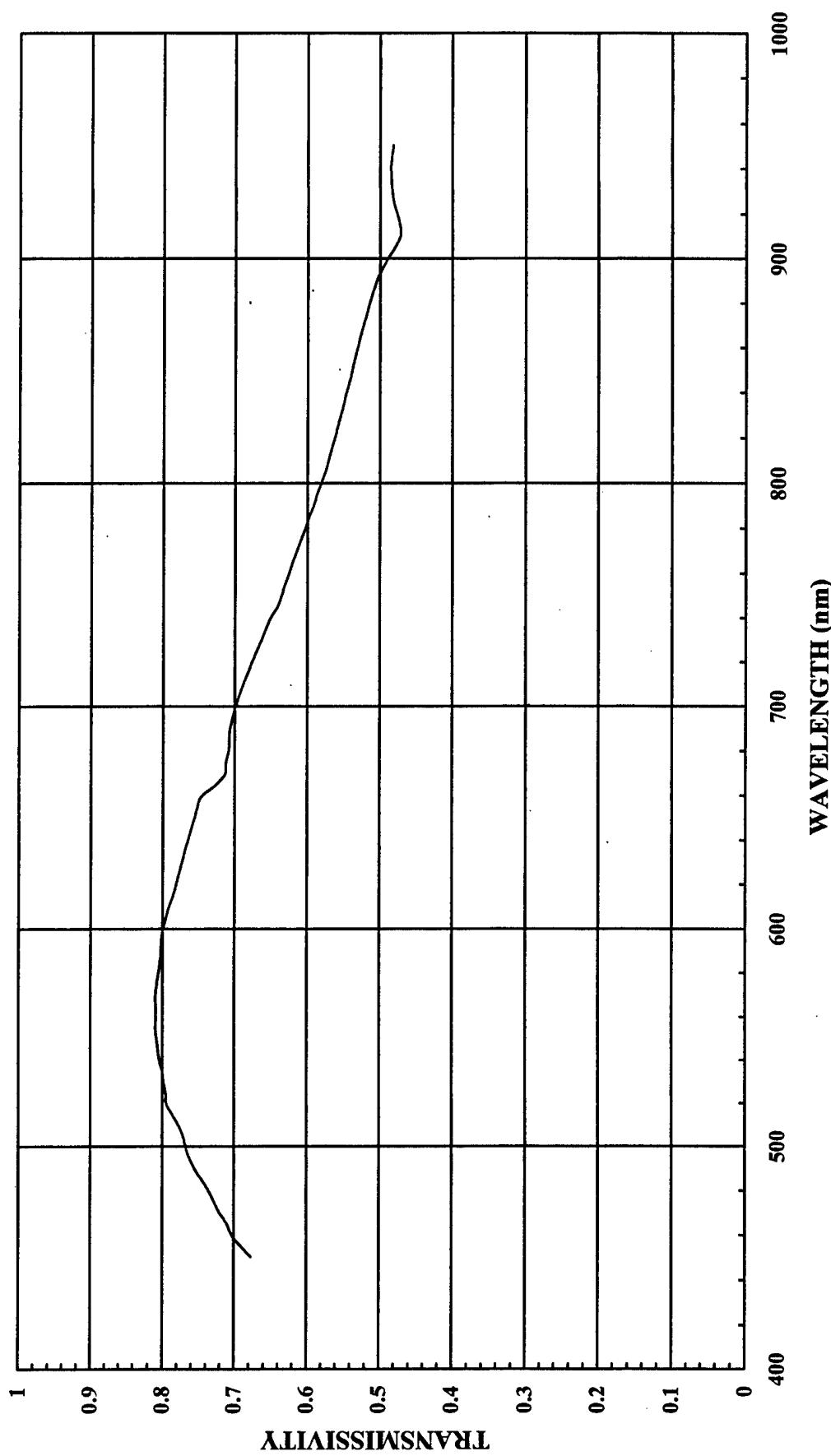
**S/N#** N/A

**Material Type:** N/A

**Construction:** N/A

**Coating:** N/A

**C-130 WINDSCREEN (NO SERIAL NUMBER) @ NORMAL  
T<sub>nv</sub>g = 63%**

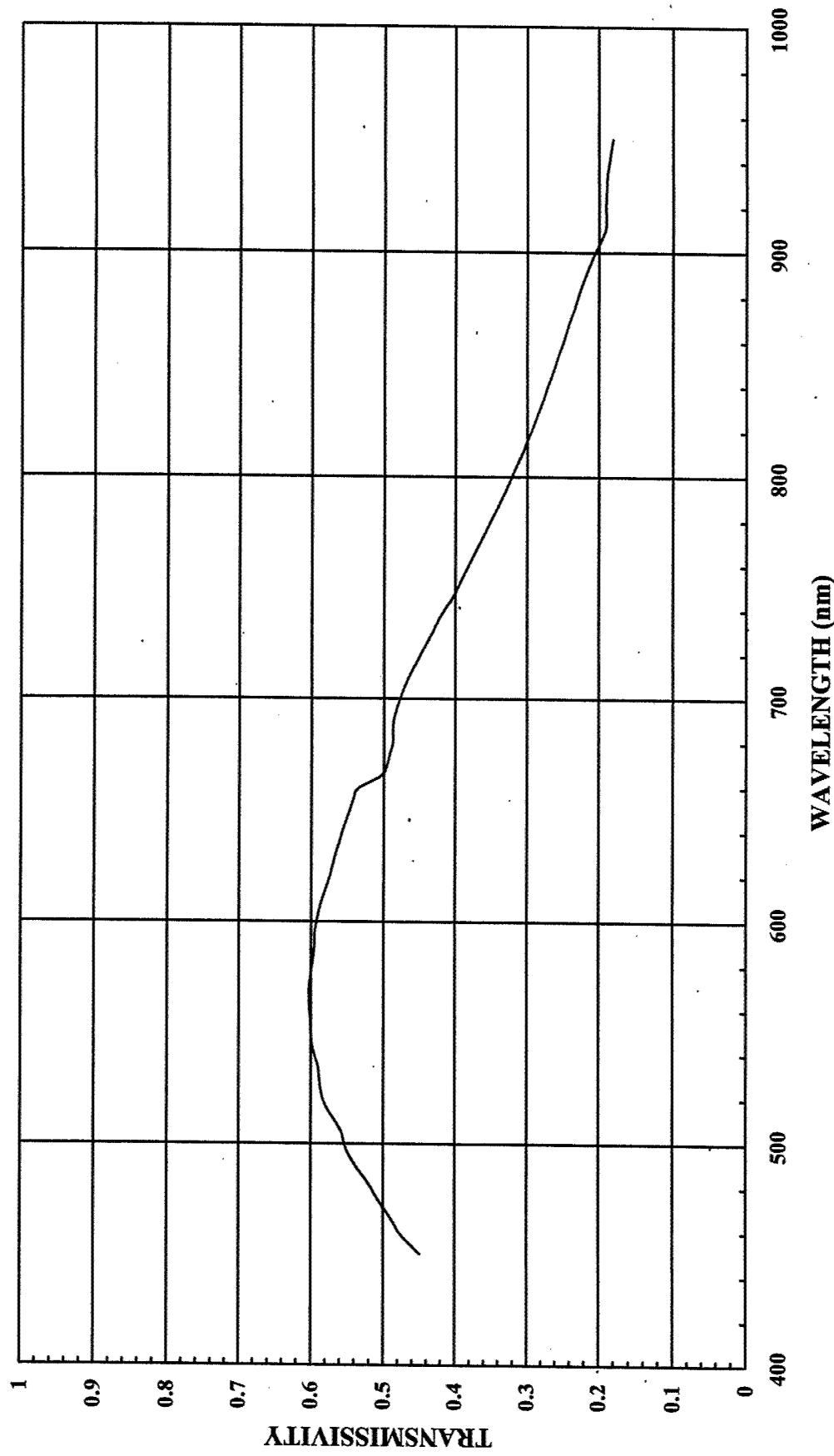


**C-130, NO SERIAL NUMBER @ NORMAL**

WAVELENGTH(nm)	READING	SPECTRA-	RELATIVE	NVG SPECTRAL RESPONSE
		RADIOMETRIC	SPECTRAL SENSITIVITY	
		"NVIS A"		
450	0.677157		0.0001	6.77E-05
455	0.690126		0.0001125	7.76E-05
460	0.702507		0.000123	8.64E-05
465	0.71038		0.0001375	9.77E-05
470	0.720326		0.00015	1.08E-04
475	0.727684		0.00016172	1.18E-04
480	0.736552		0.000175	1.29E-04
485	0.745624		0.00019375	1.44E-04
490	0.755346		0.0002125	1.61E-04
495	0.763775		0.00022266	1.70E-04
500	0.768511		0.0002375	1.83E-04
505	0.771671		0.00027656	2.13E-04
510	0.777378		0.0003125	2.43E-04
515	0.786931		0.00034279	2.70E-04
520	0.795011		0.000375	2.98E-04
525	0.795734		0.00041875	3.33E-04
530	0.798839		0.0004625	3.69E-04
535	0.800346		0.00050703	4.06E-04
540	0.803927		0.00055	4.42E-04
545	0.806502		0.00058359	4.71E-04
550	0.807985		0.000625	5.05E-04
555	0.809852		0.0007	5.67E-04
560	0.808861		0.000775	6.27E-04
565	0.809471		0.00085	6.88E-04
570	0.809713		0.000925	7.49E-04
575	0.807784		0.0014525	1.17E-03
580	0.805861		0.00198	1.60E-03
585	0.803758		0.0047175	3.79E-03
590	0.801976		0.0078	6.26E-03
595	0.801785		0.0114	9.14E-03
600	0.799821		0.015	1.20E-02
605	0.795439		0.026263	2.09E-02
610	0.791538		0.052	4.12E-02
615	0.786222		0.088388	6.95E-02
620	0.781335		0.175	1.37E-01
625	0.777843		0.43288	3.37E-01
630	0.774073		0.6138	4.75E-01
635	0.770057		0.67756	5.22E-01
640	0.765629		0.7448	5.70E-01
645	0.761727		0.82458	6.28E-01
650	0.756124		0.8897	6.73E-01
655	0.75202		0.89654	6.74E-01
660	0.746842		0.9034	6.75E-01
665	0.725026		0.91051	6.60E-01
670	0.712948		0.9172	6.54E-01
675	0.712433		0.92241	6.57E-01
680	0.708483		0.9276	6.57E-01
685	0.707574		0.93254	6.60E-01
690	0.706799		0.9379	6.63E-01

695	0.702933	0.9448	6.64E-01
700	0.69917	0.9517	6.65E-01
705	0.694794	0.9586	6.66E-01
710	0.688425	0.9655	6.65E-01
715	0.682836	0.97304	6.64E-01
720	0.677668	0.9793	6.64E-01
725	0.670291	0.9802	6.57E-01
730	0.663894	0.9828	6.52E-01
735	0.658635	0.98838	6.51E-01
740	0.650754	0.9931	6.46E-01
745	0.642004	0.99719	6.40E-01
750	0.63648	1	6.36E-01
755	0.630911	1	6.31E-01
760	0.625684	1	6.26E-01
765	0.621154	1	6.21E-01
770	0.614663	1	6.15E-01
775	0.609272	0.99814	6.08E-01
780	0.603344	0.9966	6.01E-01
785	0.597666	0.99543	5.95E-01
790	0.591678	0.9945	5.88E-01
795	0.587091	0.9938	5.83E-01
800	0.580834	0.9931	5.77E-01
805	0.575175	0.9862	5.67E-01
810	0.571138	0.9793	5.59E-01
815	0.566604	0.97283	5.51E-01
820	0.562321	0.9655	5.43E-01
825	0.558751	0.95515	5.34E-01
830	0.553964	0.9448	5.23E-01
835	0.550037	0.93402	5.14E-01
840	0.546633	0.9241	5.05E-01
845	0.54177	0.9172	4.97E-01
850	0.538506	0.9103	4.90E-01
855	0.534961	0.86334	4.62E-01
860	0.530582	0.8	4.24E-01
865	0.527229	0.72848	3.84E-01
870	0.523007	0.6552	3.43E-01
875	0.518103	0.58016	3.01E-01
880	0.514569	0.5034	2.59E-01
885	0.510094	0.42523	2.17E-01
890	0.504333	0.3448	1.74E-01
895	0.497618	0.25704	1.28E-01
900	0.489638	0.175	8.57E-02
905	0.480244	0.11009	5.29E-02
910	0.471911	0.0621	2.93E-02
915	0.472614	0.043125	2.04E-02
920	0.476093	0.0276	1.31E-02
925	0.481138	0.015525	7.47E-03
930	0.483254	0.0069	3.33E-03
935	0.484164	0.00E+00	0.00E+00
940	0.484914	0.00E+00	0.00E+00
945	0.483898	0.00E+00	0.00E+00
950	0.481601	0.00E+00	0.00E+00
<b>SUM</b>		30.91903082	
<b>T<sub>nv</sub>g(SUM/NVG)</b>		0.63490698	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

C-130 WINDSCREEN (NO SERIAL NUMBER) @ DESIGN EYE  
 $T_{\text{avg}} = 39\%$



C-130, NO SERIAL NUMBER @ DESIGN EYE			
WAVELENGTH(nm)	SPECTRA- RADIOMETRIC READING	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
450	0.449003	0.0001	4.49E-05
455	0.463473	0.0001125	5.21E-05
460	0.477643	0.000123	5.88E-05
465	0.488101	0.0001375	6.71E-05
470	0.497527	0.00015	7.46E-05
475	0.507498	0.00016172	8.21E-05
480	0.517701	0.000175	9.06E-05
485	0.527587	0.00019375	1.02E-04
490	0.538155	0.0002125	1.14E-04
495	0.547986	0.00022266	1.22E-04
500	0.553941	0.0002375	1.32E-04
505	0.557132	0.00027656	1.54E-04
510	0.564608	0.0003125	1.76E-04
515	0.576295	0.00034279	1.98E-04
520	0.583292	0.000375	2.19E-04
525	0.586619	0.00041875	2.46E-04
530	0.588805	0.0004625	2.72E-04
535	0.590316	0.00050703	2.99E-04
540	0.594813	0.00055	3.27E-04
545	0.599212	0.00058359	3.50E-04
550	0.600217	0.000625	3.75E-04
555	0.600636	0.0007	4.20E-04
560	0.602145	0.000775	4.67E-04
565	0.602374	0.00085	5.12E-04
570	0.602796	0.000925	5.58E-04
575	0.600854	0.0014525	8.73E-04
580	0.599078	0.00198	1.19E-03
585	0.596729	0.0047175	2.82E-03
590	0.59517	0.0078	4.64E-03
595	0.59506	0.0114	6.78E-03
600	0.592773	0.015	8.89E-03
605	0.58901	0.026263	1.55E-02
610	0.584872	0.052	3.04E-02
615	0.57985	0.088388	5.13E-02
620	0.574348	0.175	1.01E-01
625	0.570496	0.43288	2.47E-01
630	0.566772	0.6138	3.48E-01
635	0.561515	0.67756	3.80E-01
640	0.557414	0.74448	4.15E-01
645	0.552921	0.82458	4.56E-01
650	0.546659	0.8897	4.86E-01
655	0.542045	0.89654	4.86E-01
660	0.535422	0.9034	4.84E-01
665	0.504046	0.91051	4.59E-01
670	0.496004	0.9172	4.55E-01
675	0.492249	0.92241	4.54E-01
680	0.487704	0.9276	4.52E-01
685	0.487542	0.93254	4.55E-01
690	0.486818	0.9379	4.57E-01

695	0.482585	0.9448	4.56E-01
700	0.477492	0.9517	4.54E-01
705	0.472339	0.9586	4.53E-01
710	0.464396	0.9655	4.48E-01
715	0.457055	0.97304	4.45E-01
720	0.449541	0.9793	4.40E-01
725	0.440156	0.9802	4.31E-01
730	0.432198	0.9828	4.25E-01
735	0.425443	0.98838	4.20E-01
740	0.415215	0.9931	4.12E-01
745	0.405226	0.99719	4.04E-01
750	0.397463	1	3.97E-01
755	0.389125	1	3.89E-01
760	0.381844	1	3.82E-01
765	0.37478	1	3.75E-01
770	0.365625	1	3.66E-01
775	0.358712	0.99814	3.58E-01
780	0.351493	0.9966	3.50E-01
785	0.342719	0.99543	3.41E-01
790	0.335677	0.9945	3.34E-01
795	0.328917	0.9938	3.27E-01
800	0.321186	0.9931	3.19E-01
805	0.314732	0.9862	3.10E-01
810	0.30803	0.9793	3.02E-01
815	0.300943	0.97283	2.93E-01
820	0.294644	0.9655	2.84E-01
825	0.289188	0.95515	2.76E-01
830	0.282168	0.9448	2.67E-01
835	0.276479	0.93402	2.58E-01
840	0.271555	0.9241	2.51E-01
845	0.265173	0.9172	2.43E-01
850	0.259813	0.9103	2.37E-01
855	0.255205	0.86334	2.20E-01
860	0.248507	0.8	1.99E-01
865	0.244223	0.72848	1.78E-01
870	0.23941	0.6552	1.57E-01
875	0.232975	0.58016	1.35E-01
880	0.228666	0.5034	1.15E-01
885	0.223887	0.42523	9.52E-02
890	0.218346	0.3448	7.53E-02
895	0.211745	0.25704	5.44E-02
900	0.205382	0.175	3.59E-02
905	0.198763	0.11009	2.19E-02
910	0.191356	0.0621	1.19E-02
915	0.190188	0.043125	8.20E-03
920	0.190544	0.0276	5.26E-03
925	0.190379	0.015525	2.96E-03
930	0.189665	0.0069	1.31E-03
935	0.188357	0	0.00E+00
940	0.185844	0	0.00E+00
945	0.183686	0	0.00E+00
950	0.18078	0	0.00E+00
<b>SUM</b>		19.0275175	
<b>Tnvg(SUM/NVG)</b>		0.390720645	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

## **FIGHTERS/FIGHTER BOMBERS**

# **F – 15**

**Aircraft:** F – 15

**Part Name:** Windscreen

**Manufactured:** N/A

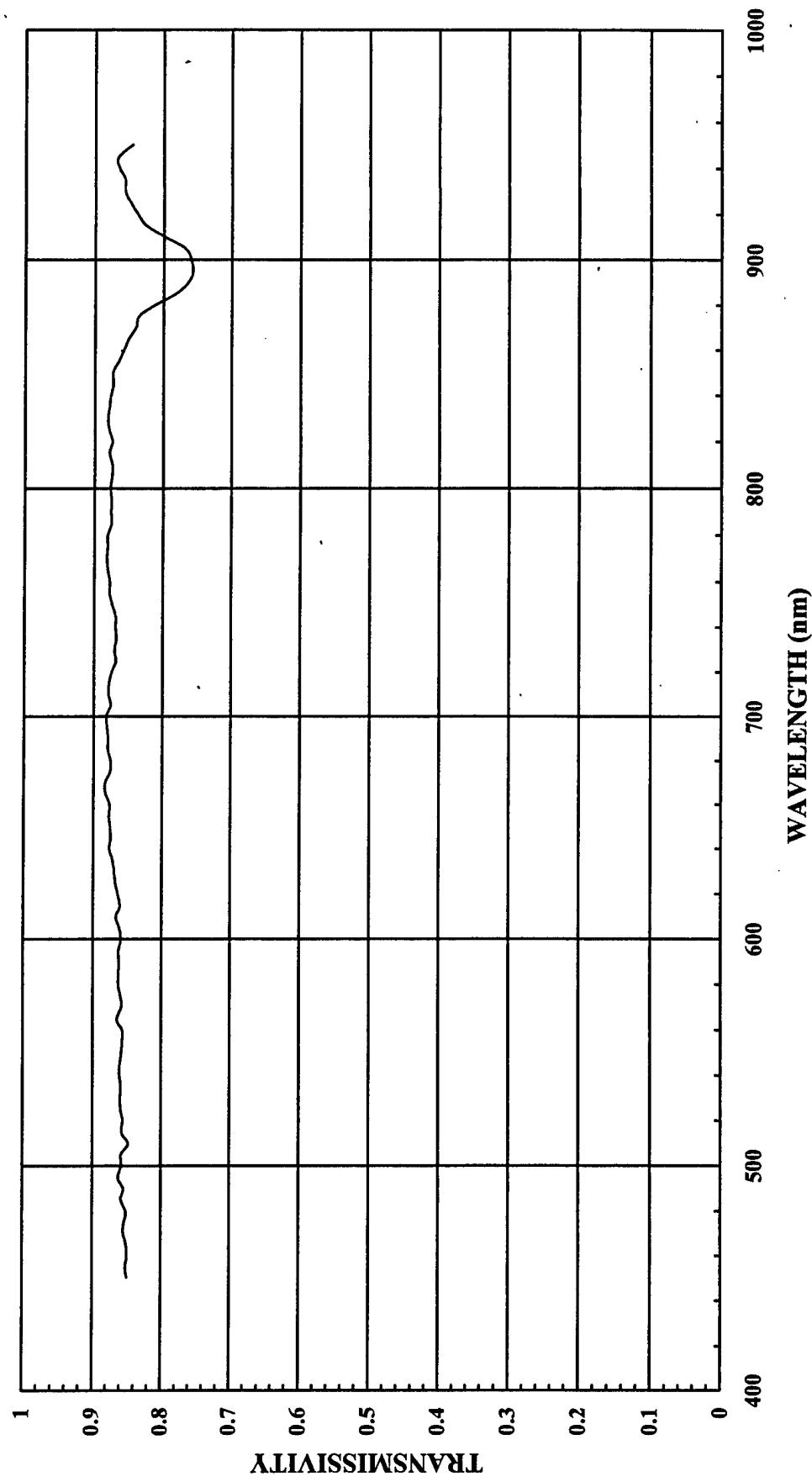
**S/N#** N/A, Laboratory Windscreen

**Material Type:** Acrylic

**Construction:** Stretched

**Coating:** N/A

F-15 WINDSCREEN (LABORATORY, STRETCHED ACRYLIC, NO SERIAL  
NUMBER) @ NORMAL  
 $T_{avg} = 87\%$

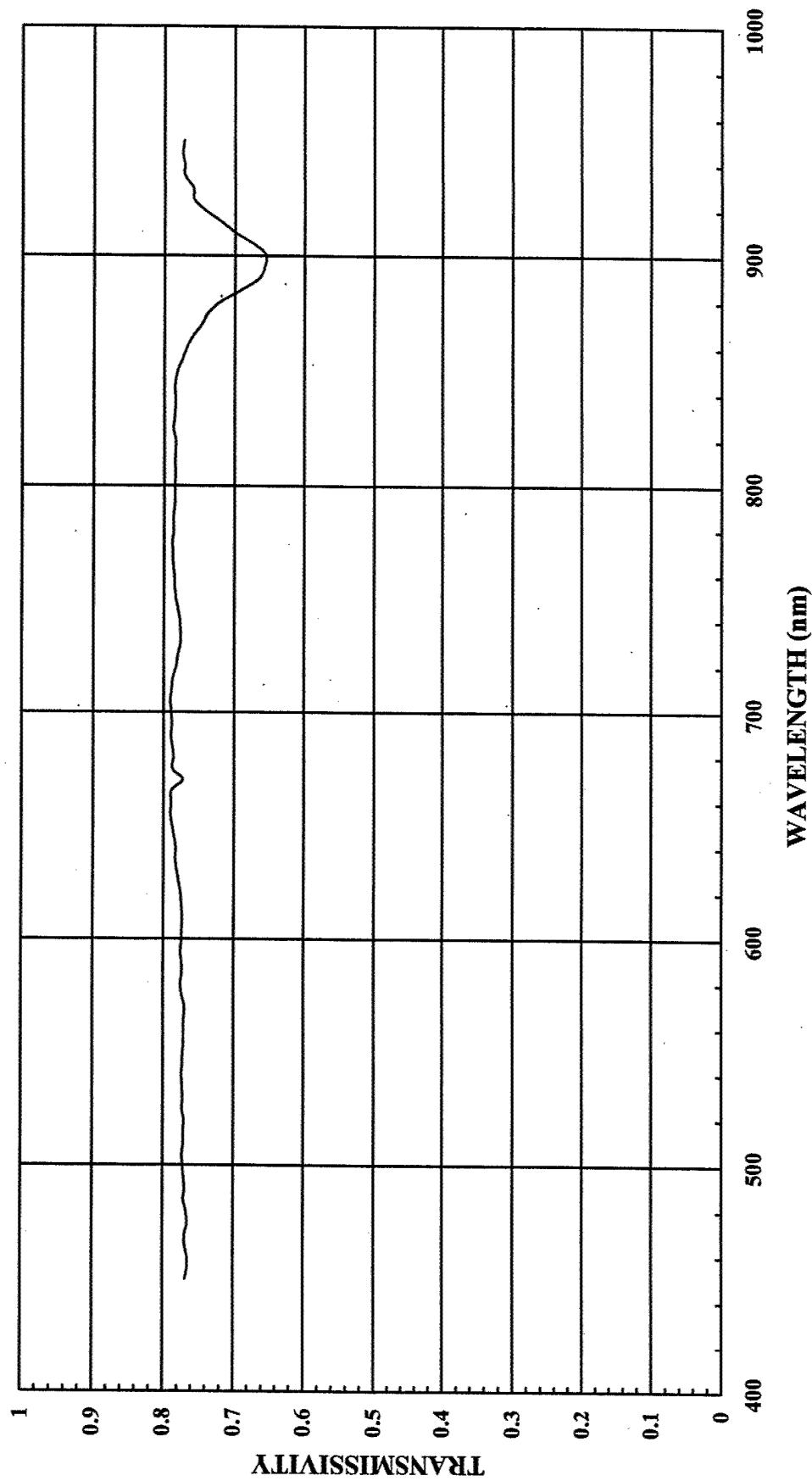


**F-15, LABORATORY, STRETCHED ACRYLIC, NO SERIAL NUMBER @ NORMAL**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
	READING	"NVIS A"	RESPONSE
450	0.8495387	0.0001	8.49539E-05
455	0.8517035	0.0001125	9.58166E-05
460	0.8494089	0.000123	0.000104477
465	0.8510386	0.0001375	0.000117018
470	0.8549043	0.00015	0.000128236
475	0.8538077	0.00016172	0.000138078
480	0.8509384	0.000175	0.000148914
485	0.8582555	0.00019375	0.000166287
490	0.8548229	0.0002125	0.00018165
495	0.8625001	0.0002266	0.000192044
500	0.8579138	0.0002375	0.000203755
505	0.8583071	0.00027656	0.000237373
510	0.8478849	0.0003125	0.000264964
515	0.857143	0.00034279	0.00029382
520	0.8558141	0.000375	0.00032093
525	0.8590807	0.00041875	0.00035974
530	0.8599164	0.0004625	0.000397711
535	0.8591119	0.00050703	0.000435596
540	0.8609567	0.00055	0.000473526
545	0.8604652	0.00058359	0.000502159
550	0.8582997	0.000625	0.000536437
555	0.8571429	0.0007	0.0006
560	0.856588	0.000775	0.000663856
565	0.864567	0.00085	0.000734882
570	0.8583156	0.000925	0.000793942
575	0.8596804	0.0014525	0.001248686
580	0.8629532	0.00198	0.001708647
585	0.8624015	0.0047175	0.004068379
590	0.8619815	0.0078	0.006723456
595	0.8628711	0.0114	0.009836731
600	0.8594878	0.015	0.012892317
605	0.8621107	0.026263	0.022641613
610	0.8667974	0.052	0.045073465
615	0.8608366	0.088388	0.076087625
620	0.8644603	0.175	0.151280553
625	0.8679196	0.43288	0.375705036
630	0.8693624	0.6138	0.533614641
635	0.8721806	0.67756	0.590954687
640	0.8764046	0.7448	0.652746146
645	0.874494	0.82458	0.721090263
650	0.8757144	0.8897	0.779123102
655	0.8771847	0.89654	0.786431171
660	0.8761399	0.9034	0.791504786
665	0.8827827	0.91051	0.803782476
670	0.8825365	0.9172	0.809462478
675	0.8756588	0.92241	0.807716434
680	0.8751928	0.9276	0.811828841
685	0.8792874	0.93254	0.819970672
690	0.8790539	0.9379	0.824464653
695	0.8804021	0.9448	0.831803904
700	0.8816761	0.9517	0.839091144
705	0.8756138	0.9586	0.839363389

710	0.8785167	0.9655	0.848207874
715	0.8779071	0.97304	0.854238725
720	0.8738209	0.9793	0.855732807
725	0.8681448	0.9802	0.850955533
730	0.8700566	0.9828	0.855091626
735	0.8675133	0.98838	0.857432795
740	0.8690271	0.9931	0.863030813
745	0.8686328	0.99719	0.866191942
750	0.8740549	1	0.8740549
755	0.8772539	1	0.8772539
760	0.8768919	1	0.8768919
765	0.8802755	1	0.8802755
770	0.8814537	1	0.8814537
775	0.8803613	0.99814	0.878723828
780	0.880618	0.9966	0.877623899
785	0.8750619	0.99543	0.871062867
790	0.8762995	0.9945	0.871479853
795	0.8750001	0.9938	0.869575099
800	0.8768179	0.9931	0.870767856
805	0.8747114	0.9862	0.862640383
810	0.8742305	0.9793	0.856133929
815	0.8779372	0.97283	0.854083646
820	0.8741907	0.9655	0.844031121
825	0.8787596	0.95515	0.839347232
830	0.8809448	0.9448	0.832316647
835	0.8783875	0.93402	0.820431493
840	0.8765433	0.9241	0.810013664
845	0.8732144	0.9172	0.800912248
850	0.8733609	0.9103	0.795020427
855	0.8652038	0.86334	0.746965049
860	0.8581968	0.8	0.68655744
865	0.8502813	0.72848	0.619412921
870	0.8404352	0.6552	0.550653143
875	0.8365796	0.58016	0.485350021
880	0.8150377	0.5034	0.410289978
885	0.7814855	0.42523	0.332311079
890	0.7641348	0.3448	0.263473679
895	0.757264	0.25704	0.194647139
900	0.7601027	0.175	0.133017973
905	0.7689748	0.11009	0.084656436
910	0.7963865	0.0621	0.049455602
915	0.8269796	0.043125	0.035663495
920	0.8385378	0.0276	0.023143643
925	0.84793	0.015525	0.013164113
930	0.8564274	0.0069	0.005909349
935	0.8567617	0	0
940	0.8646896	0	0
945	0.8671876	0	0
950	0.845596	0	0
<b>SUM</b>		42.38803873	
<b>T<sub>NVG</sub>(SUM/NVG)</b>		0.870417375	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

F-15 WINDSCREEN (LABORATORY, STRETCHED ACRYLIC, NO SERIAL  
NUMBER) @ DESIGN EYE  
 $T_{avg} = 78\%$



**F-15. LABORATORY, STRETCHED ACRYLIC, NO SERIAL NUMBER @ DESIGN EYE**

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
	READING	"NVIS A"	
450	0.7687366	0.0001	7.68737E-05
455	0.7654986	0.0001125	8.61186E-05
460	0.7654867	0.000123	9.41549E-05
465	0.7692308	0.0001375	0.000105769
470	0.7693201	0.00015	0.000115398
475	0.765625	0.00016172	0.000123817
480	0.7678284	0.000175	0.00013437
485	0.7709643	0.00019375	0.000149374
490	0.7694982	0.0002125	0.000163518
495	0.7712963	0.00022266	0.000171737
500	0.7722993	0.0002375	0.000183421
505	0.7733454	0.00027656	0.000213876
510	0.7716607	0.0003125	0.000241144
515	0.7716837	0.00034279	0.000264525
520	0.7707432	0.000375	0.000289029
525	0.773258	0.00041875	0.000323802
530	0.7727446	0.0004625	0.000357394
535	0.773267	0.00050703	0.00039207
540	0.7741212	0.00055	0.000425767
545	0.7730796	0.00058359	0.000451162
550	0.7725424	0.000625	0.000482839
555	0.7714002	0.0007	0.00053998
560	0.7714844	0.000775	0.0005979
565	0.7710236	0.00085	0.00065537
570	0.7700519	0.000925	0.000712298
575	0.7737422	0.0014525	0.001123861
580	0.7760094	0.00198	0.001536499
585	0.773712	0.0047175	0.003649986
590	0.7747362	0.0078	0.006042942
595	0.7760952	0.0114	0.008847485
600	0.7742829	0.015	0.011614244
605	0.7741387	0.026263	0.020331205
610	0.7736906	0.052	0.040231911
615	0.774905	0.088388	0.068492303
620	0.7760881	0.175	0.135815418
625	0.7788079	0.43288	0.337130364
630	0.7817522	0.6138	0.4798395
635	0.7837837	0.67756	0.531060484
640	0.7831414	0.7448	0.583283715
645	0.7853553	0.82458	0.647588273
650	0.7882409	0.8897	0.701297929
655	0.7906705	0.89654	0.70886773
660	0.789553	0.9034	0.71328218
665	0.7889043	0.91051	0.718305254
670	0.7735192	0.9172	0.70947181
675	0.7880759	0.92241	0.726929091
680	0.786338	0.9276	0.729407129
685	0.7882571	0.93254	0.735081276
690	0.7898863	0.9379	0.740834361
695	0.7886263	0.9448	0.745094128
700	0.7893158	0.9517	0.751191847
705	0.7910779	0.9586	0.758327275
710	0.7895963	0.9655	0.762355228
715	0.7875976	0.97304	0.766363969
720	0.7829787	0.9793	0.766771041
725	0.7812353	0.9802	0.765766841
730	0.7768362	0.9828	0.763474617
735	0.776883	0.98838	0.76785562
740	0.7777228	0.9931	0.772356513
745	0.780398	0.99719	0.778205082
750	0.7837198	1	0.7837198

755	0.7853002	1	0.7853002
760	0.7856334	1	0.7856334
765	0.7874331	1	0.7874331
770	0.787738	1	0.787738
775	0.7886563	0.99814	0.787189399
780	0.7869233	0.9966	0.784247761
785	0.7871662	0.99543	0.78356885
790	0.7860274	0.9945	0.781704249
795	0.7848853	0.9938	0.780019011
800	0.7852691	0.9931	0.779850743
805	0.7846599	0.9862	0.773831593
810	0.7848651	0.9793	0.768618392
815	0.7844329	0.97283	0.763119858
820	0.7841328	0.9655	0.757080218
825	0.7873671	0.95515	0.752053686
830	0.7861456	0.9448	0.742750363
835	0.7844233	0.93402	0.732667051
840	0.7848403	0.9241	0.725270921
845	0.7848776	0.9172	0.719889735
850	0.7812966	0.9103	0.711214295
855	0.7750195	0.86334	0.669105335
860	0.7692932	0.8	0.61543456
865	0.7609901	0.72848	0.554366068
870	0.7475336	0.6552	0.489784015
875	0.7391714	0.58016	0.428837679
880	0.7224146	0.5034	0.36366351
885	0.6902608	0.42523	0.2935196
890	0.6664786	0.3448	0.229801821
895	0.6581146	0.25704	0.169161777
900	0.6556544	0.175	0.11473952
905	0.6723911	0.11009	0.074023536
910	0.6983472	0.0621	0.043367361
915	0.7183908	0.043125	0.030980603
920	0.7439759	0.0276	0.020533735
925	0.758675	0.015525	0.011778429
930	0.7590759	0.0069	0.005237624
935	0.7718062	0	0
940	0.7716895	0	0
945	0.7745665	0	0
950	0.772541	0	0
<b>SUM</b>		<b>37.95241462</b>	
<b>T<sub>avg</sub>(SUM/NVG)</b>		<b>0.779334031</b>	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **F – 15**

**Aircraft:** F – 15

**Part Name:** Windscreen, SIERRACIN

**Manufactured:** 8/93

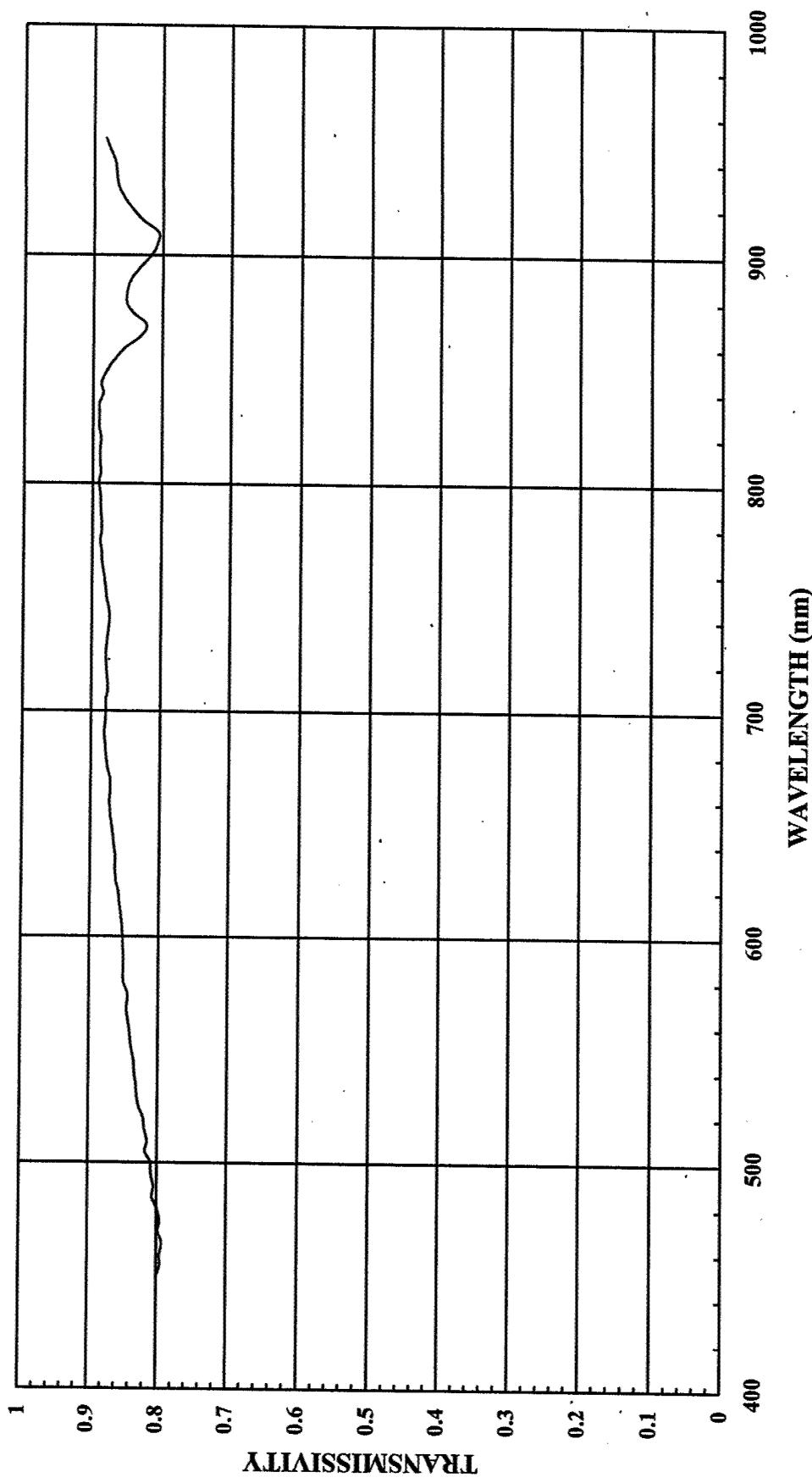
**S/N#** 009

**Material Type:** N/A

**Construction:** w/Inclusions

**Coating:** N/A

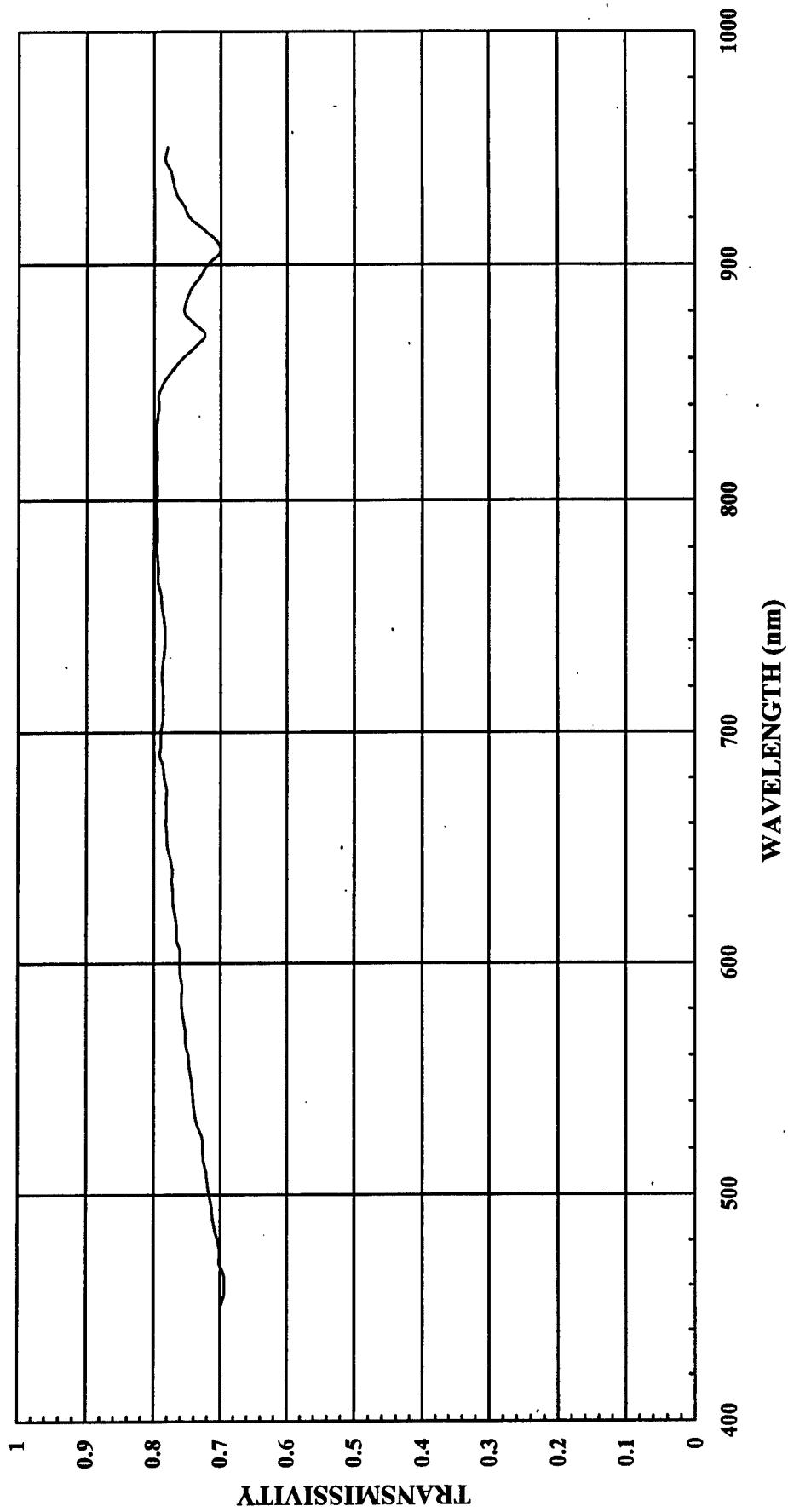
F-15 WINDSCREEN (WITH INCLUSIONS, SIERRACIN, S/N# 009, MFG. 8/93) @  
NORMAL  
 $T_{avg} = 88\%$



<u>F-15, SIERRACIN, W/INCLUSIONS, S/N# 009, @ NORMAL</u>			
WAVELENGTH(nm)	<u>SPECTRA- RADIOMETRIC</u>	<u>RELATIVE SPECTRAL SENSITIVITY</u>	<u>NVG SPECTRAL RESPONSE</u>
	<u>READING</u>	<u>"NVIS A"</u>	
450	0.8008565	0.0001	8.00857E-05
455	0.7951482	0.0001125	8.94542E-05
460	0.795828	0.000123	9.78868E-05
465	0.7930828	0.0001375	0.000109049
470	0.7983731	0.00015	0.000119756
475	0.7957589	0.00016172	0.00012869
480	0.8	0.000175	0.00014
485	0.8071278	0.00019375	0.000156381
490	0.8052658	0.0002125	0.000171119
495	0.8087963	0.00022266	0.000180087
500	0.8095024	0.0002375	0.000192257
505	0.8173165	0.00027656	0.000226037
510	0.8145307	0.0003125	0.000254541
515	0.8188775	0.00034279	0.000280703
520	0.820291	0.000375	0.000307609
525	0.826742	0.00041875	0.000346198
530	0.829844	0.0004625	0.000383803
535	0.8310992	0.00050703	0.000421392
540	0.8332086	0.00055	0.000458265
545	0.8343905	0.00058359	0.000486942
550	0.8376272	0.000625	0.000523517
555	0.8394161	0.0007	0.000587591
560	0.8411459	0.000775	0.000651888
565	0.8440945	0.00085	0.00071748
570	0.8444648	0.000925	0.00078113
575	0.8437035	0.0014525	0.001225479
580	0.8499852	0.00198	0.001682971
585	0.8501171	0.0047175	0.004010427
590	0.8500142	0.0078	0.006630111
595	0.8504598	0.0114	0.009695242
600	0.851535	0.015	0.012773025
605	0.8524988	0.026263	0.022389176
610	0.8545676	0.052	0.044437515
615	0.8567807	0.088388	0.075729133
620	0.8584164	0.175	0.15022287
625	0.8619867	0.43288	0.373136803
630	0.8631415	0.6138	0.529796253
635	0.8628442	0.67756	0.584628716
640	0.8652291	0.7448	0.644422634
645	0.8667145	0.82458	0.714675442
650	0.8695028	0.8897	0.773596641
655	0.8710737	0.89654	0.780952415
660	0.8719237	0.9034	0.787695871
665	0.8710124	0.91051	0.7930655
670	0.8710801	0.9172	0.798954668
675	0.8753388	0.92241	0.807421263
680	0.8777607	0.9276	0.814210825
685	0.8788719	0.93254	0.819583202
690	0.8804391	0.9379	0.825763832
695	0.8794107	0.9448	0.830867229
700	0.8784513	0.9517	0.836022102
705	0.8786368	0.9586	0.842261236

710	0.8757764	0.9655	0.845562114
715	0.8769531	0.97304	0.853310444
720	0.8780142	0.9793	0.859839306
725	0.8788021	0.9802	0.861401818
730	0.8776471	0.9828	0.86255157
735	0.8756513	0.98838	0.865476232
740	0.8740099	0.9931	0.867979232
745	0.8744478	0.99719	0.872020717
750	0.878372	1	0.878372
755	0.8801298	1	0.8801298
760	0.8821663	1	0.8821663
765	0.8854724	1	0.8854724
770	0.8862329	1	0.8862329
775	0.8885888	0.99814	0.886936025
780	0.8861582	0.9966	0.883145262
785	0.8868479	0.99543	0.882795005
790	0.8878577	0.9945	0.882974483
795	0.8882591	0.9938	0.882751894
800	0.8906516	0.9931	0.884506104
805	0.8879884	0.9862	0.87573416
810	0.8892432	0.9793	0.870835866
815	0.889024	0.97283	0.864869218
820	0.8880689	0.9655	0.857430523
825	0.8908693	0.95515	0.850913812
830	0.8903719	0.9448	0.841223371
835	0.8908972	0.93402	0.832115803
840	0.8851122	0.9241	0.817932184
845	0.8874689	0.9172	0.813986475
850	0.878912	0.9103	0.800073594
855	0.8681149	0.86334	0.749478318
860	0.8545898	0.8	0.68367184
865	0.8302535	0.72848	0.60482307
870	0.8233184	0.6552	0.539438216
875	0.8408662	0.58016	0.487836935
880	0.8515586	0.5034	0.428674599
885	0.8504524	0.42523	0.361637874
890	0.8453725	0.3448	0.291484438
895	0.8329355	0.25704	0.214097741
900	0.815756	0.175	0.1427573
905	0.8084545	0.11009	0.089002756
910	0.8071625	0.0621	0.050124791
915	0.8310369	0.043125	0.035838466
920	0.8448796	0.0276	0.023318677
925	0.8564669	0.015525	0.013296649
930	0.8638614	0.0069	0.005960644
935	0.8669603	0	0
940	0.8684931	0	0
945	0.8747591	0	0
950	0.8821722	0	0
<b>SUM</b>		<b>42.64392337</b>	
<b>T<sub>nv</sub>g(SUM/NVG)</b>		<b>0.875671839</b>	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

F-15 WINDSCREEN (WITH INCLUSIONS, SIERRACIN, S/N# 009, MFG. 8/93)  
@ DESIGN EYE  
 $T_{avg} = 78\%$



**F-15, SIERRACIN, W/INCLUSIONS, S/N# 009, @ DESIGN EYE**

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC READING	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
450	0.7009279	0.0001	7.00928E-05
455	0.6954178	0.0001125	7.82345E-05
460	0.6940581	0.000123	8.53691E-05
465	0.6952892	0.0001375	9.56023E-05
470	0.7019175	0.00015	0.000105288
475	0.7008928	0.00016172	0.000113348
480	0.7045577	0.000175	0.000123298
485	0.7085954	0.00019375	0.00013729
490	0.7118728	0.0002125	0.000151273
495	0.7138889	0.0002266	0.000158955
500	0.7171671	0.0002375	0.000170327
505	0.719855	0.00027656	0.000199083
510	0.7215704	0.0003125	0.000225491
515	0.7257653	0.00034279	0.000248785
520	0.7267007	0.000375	0.000272513
525	0.7280602	0.00041875	0.000304875
530	0.7358203	0.0004625	0.000340317
535	0.7391803	0.00050703	0.000374787
540	0.7412117	0.00055	0.000407666
545	0.7427766	0.00058359	0.000433477
550	0.7440678	0.000625	0.000465042
555	0.7471798	0.0007	0.000523026
560	0.7480469	0.000775	0.000579736
565	0.7524409	0.00085	0.000639575
570	0.7526686	0.000925	0.000696218
575	0.7552844	0.0014525	0.001097051
580	0.7583259	0.00198	0.001501485
585	0.7584895	0.0047175	0.003578174
590	0.7579128	0.0078	0.00591172
595	0.760411	0.0114	0.008668685
600	0.7611977	0.015	0.011417966
605	0.7605532	0.026263	0.019974409
610	0.7656516	0.052	0.039813883
615	0.7660329	0.088388	0.067708116
620	0.7679601	0.175	0.134393018
625	0.7711258	0.43288	0.333804936
630	0.7719025	0.6138	0.473793755
635	0.7734276	0.67756	0.524043605
640	0.7723597	0.7448	0.575253505
645	0.7753051	0.82458	0.639301079
650	0.7801147	0.8897	0.694068049
655	0.7805907	0.89654	0.699830786
660	0.7822702	0.9034	0.706702899
665	0.7814147	0.91051	0.711485898
670	0.78223	0.9172	0.717461356
675	0.7810298	0.92241	0.720429698
680	0.7847971	0.9276	0.72797779
685	0.7864078	0.93254	0.73335673
690	0.7910623	0.9379	0.741937331
695	0.789654	0.9448	0.746065099
700	0.7896158	0.9517	0.751477357
705	0.7869216	0.9586	0.754343046

710	0.785973	0.9655	0.758856932
715	0.7861328	0.97304	0.76493866
720	0.7869976	0.9793	0.77070675
725	0.7880206	0.9802	0.772417792
730	0.7868236	0.9828	0.773290234
735	0.7844623	0.98838	0.775346848
740	0.7834159	0.9931	0.77801033
745	0.7831	0.99719	0.780899489
750	0.7856128	1	0.7856128
755	0.7883144	1	0.7883144
760	0.789259	1	0.789259
765	0.7938948	1	0.7938948
770	0.7934927	1	0.7934927
775	0.7949584	0.99814	0.793479777
780	0.7959657	0.9966	0.793259417
785	0.7952486	0.99543	0.791614314
790	0.7953081	0.9945	0.790933905
795	0.7959515	0.9938	0.791016601
800	0.7966006	0.9931	0.791104056
805	0.795369	0.9862	0.784392908
810	0.7970426	0.9793	0.780543818
815	0.7959866	0.97283	0.774359644
820	0.7955105	0.9655	0.768065388
825	0.7973734	0.95515	0.761611203
830	0.7969496	0.9448	0.752957982
835	0.7949392	0.93402	0.742489112
840	0.7929998	0.9241	0.732809452
845	0.7930422	0.9172	0.727378306
850	0.7846497	0.9103	0.714266622
855	0.7719163	0.86334	0.666426218
860	0.7587327	0.8	0.60698616
865	0.73965	0.72848	0.538820232
870	0.7237668	0.6552	0.474212007
875	0.740113	0.58016	0.429383958
880	0.7550717	0.5034	0.380103094
885	0.7514636	0.42523	0.319544867
890	0.7443567	0.3448	0.25665419
895	0.7315035	0.25704	0.18802566
900	0.7185515	0.175	0.125746513
905	0.7014531	0.11009	0.077222972
910	0.7059229	0.0621	0.043837812
915	0.7241379	0.043125	0.031228447
920	0.7477409	0.0276	0.020637649
925	0.7555205	0.015525	0.011729456
930	0.7665016	0.0069	0.005288861
935	0.7718062	0	0
940	0.7753425	0	0
945	0.783237	0	0
950	0.7797132	0	0
<b>SUM</b>		<b>38.14356843</b>	
<b>Tnvg(SUM/NVG)</b>		<b>0.78325928</b>	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **F – 15**

**Aircraft:** F – 15

**Part Name:** Windscreen, PILKINGTON

**Manufactured:** N/A

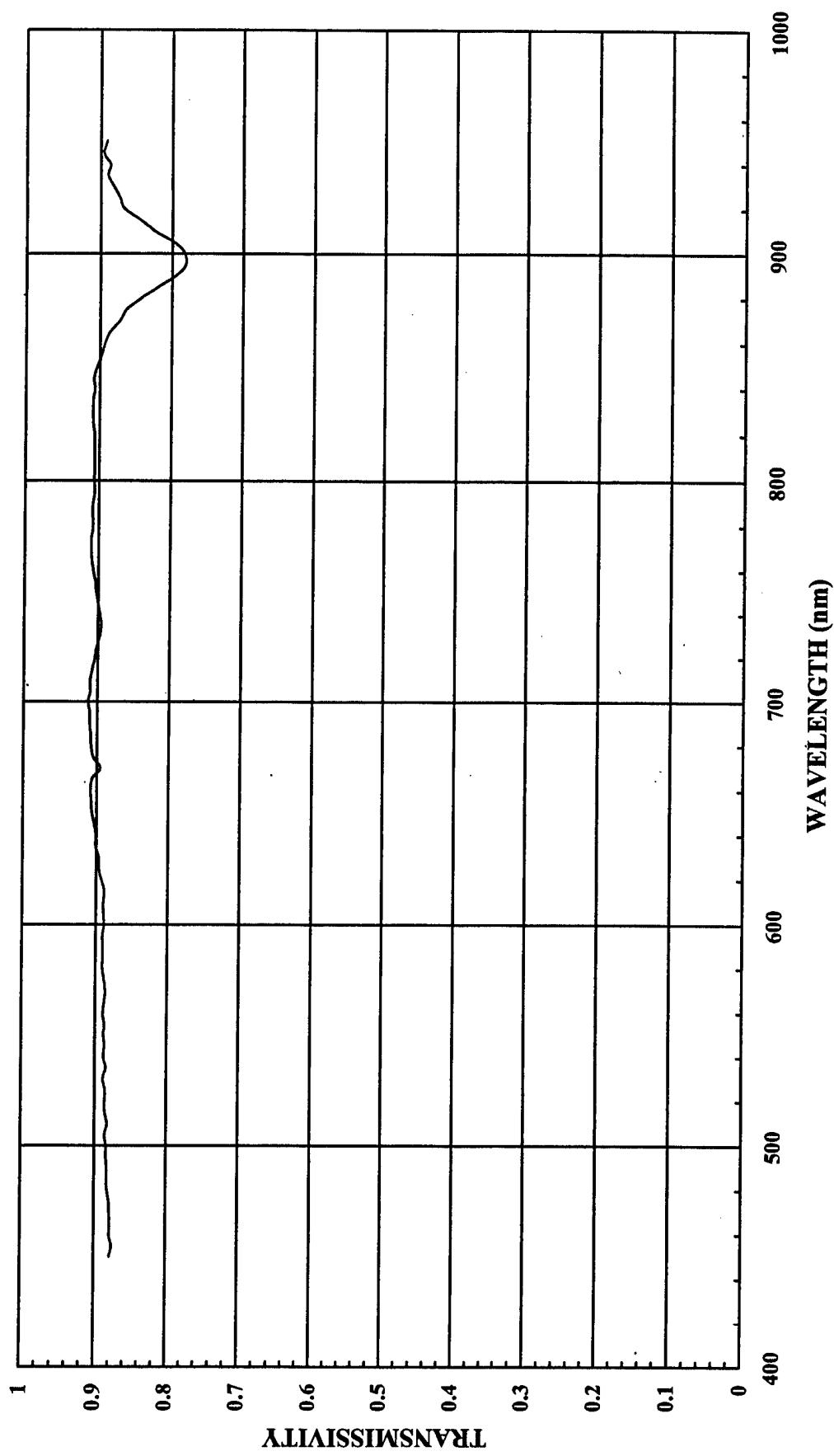
**S/N#:** A41-0492

**Material Type:** Acrylic

**Construction:** N/A

**Coating:** N/A

F-15 WINDSCREEN (ACRYLIC, PILKINGTON, S/N# A41-0492)@ NORMAL  
 $T_{avg} = 90\%$

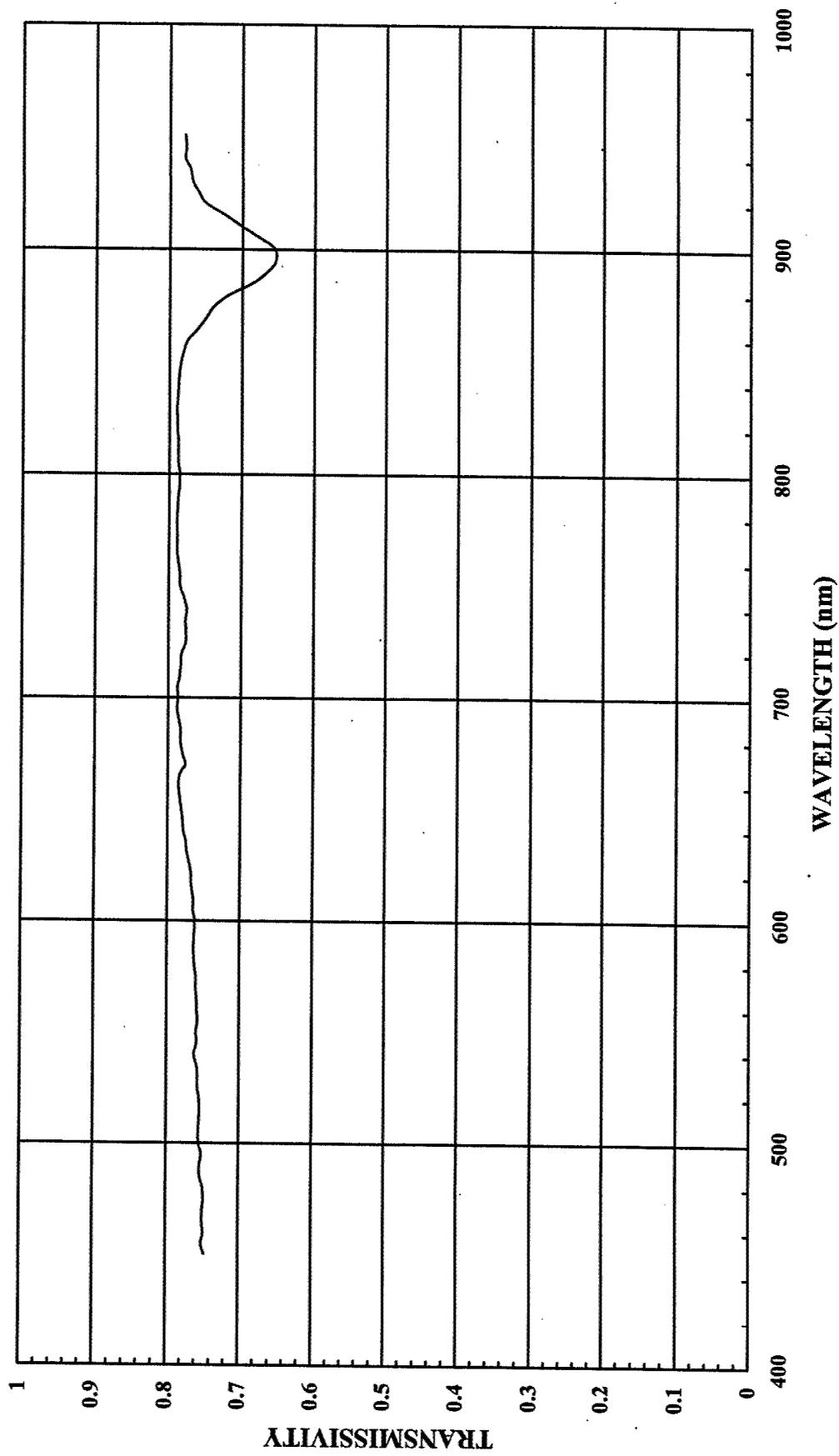


**F-15, PILKINGTON, ACRYLIC, S/N# A41-0492, @ NORMAL**

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
	READING	"NVIS A"	
450	0.8786581	0.0001	8.78658E-05
455	0.8760108	0.0001125	9.85512E-05
460	0.8792667	0.000123	0.00010815
465	0.8783541	0.0001375	0.000120774
470	0.8791401	0.00015	0.000131871
475	0.8794643	0.00016172	0.000142227
480	0.8825737	0.000175	0.00015445
485	0.8825995	0.00019375	0.000171004
490	0.8827621	0.0002125	0.000187587
495	0.8842592	0.00022266	0.000196889
500	0.8839086	0.0002375	0.000209928
505	0.8862194	0.00027656	0.000245093
510	0.8826715	0.0003125	0.000275835
515	0.8860544	0.00034279	0.000303731
520	0.8863547	0.000375	0.000332383
525	0.8854991	0.00041875	0.000370803
530	0.8888466	0.0004625	0.000411092
535	0.8851015	0.00050703	0.000448773
540	0.8881825	0.00055	0.0004885
545	0.8872446	0.00058359	0.000517787
550	0.8884746	0.000625	0.000555297
555	0.8875248	0.0007	0.000621267
560	0.8896485	0.000775	0.000689478
565	0.8878741	0.00085	0.000754693
570	0.8865508	0.000925	0.000820059
575	0.8880619	0.0014525	0.00128991
580	0.8906572	0.00198	0.001763501
585	0.8905152	0.0047175	0.004201005
590	0.8902195	0.0078	0.006943712
595	0.8910221	0.0114	0.010157652
600	0.8887771	0.015	0.013331657
605	0.8896167	0.026263	0.023364003
610	0.890134	0.052	0.046286968
615	0.8889734	0.088388	0.078574581
620	0.8930257	0.175	0.156279498
625	0.8964239	0.43288	0.388043978
630	0.8970969	0.6138	0.550638077
635	0.9012377	0.67756	0.610642616
640	0.9007596	0.7448	0.67088575
645	0.9030868	0.82458	0.744667314
650	0.9067877	0.8897	0.806769017
655	0.9076418	0.89654	0.813737179
660	0.9085886	0.9034	0.820818941
665	0.9065187	0.91051	0.825394342
670	0.8954703	0.9172	0.821325359
675	0.905149	0.92241	0.834918489
680	0.9085773	0.9276	0.842796303
685	0.9089228	0.93254	0.847606868
690	0.9106233	0.9379	0.854073593
695	0.9105858	0.9448	0.860321464
700	0.9126651	0.9517	0.868583376
705	0.9099473	0.9586	0.872275482
710	0.9101967	0.9655	0.878794914
715	0.9072266	0.97304	0.882767771
720	0.9040189	0.9793	0.885305709

725	0.9021994	0.9802	0.884335852
730	0.8978824	0.9828	0.882438823
735	0.895784	0.98838	0.88537499
740	0.8977723	0.9931	0.891577671
745	0.9000245	0.99719	0.897495431
750	0.9032181	1	0.9032181
755	0.9042429	1	0.9042429
760	0.9068661	1	0.9068661
765	0.9095366	1	0.9095366
770	0.9101372	1	0.9101372
775	0.9101958	0.99814	0.908502836
780	0.9081845	0.9966	0.905096673
785	0.9084007	0.99543	0.904249309
790	0.9084816	0.9945	0.903484951
795	0.9063427	0.9938	0.900723375
800	0.9067988	0.9931	0.900541888
805	0.9062229	0.9862	0.893717024
810	0.9066396	0.9793	0.88787216
815	0.9066586	0.97283	0.882024686
820	0.906519	0.9655	0.875244095
825	0.9090056	0.95515	0.868236699
830	0.9091198	0.9448	0.858936387
835	0.9089715	0.93402	0.84899756
840	0.9065262	0.9241	0.837720861
845	0.9080582	0.9172	0.832870981
850	0.9035022	0.9103	0.822458053
855	0.897983	0.86334	0.775264643
860	0.8935824	0.8	0.71486592
865	0.8873239	0.72848	0.646397715
870	0.8726457	0.6552	0.571757463
875	0.86444068	0.58016	0.501494249
880	0.8451262	0.5034	0.425436529
885	0.8185205	0.42523	0.348059472
890	0.7951468	0.3448	0.274166617
895	0.7810262	0.25704	0.200754974
900	0.7827192	0.175	0.13697586
905	0.7965654	0.11009	0.087693885
910	0.8230028	0.0621	0.051108474
915	0.8426724	0.043125	0.036340247
920	0.8674699	0.0276	0.023942169
925	0.8738171	0.015525	0.01356601
930	0.8811882	0.0069	0.006080199
935	0.8898678	0	0
940	0.886758	0	0
945	0.8959538	0	0
950	0.8913934	0	0
<b>SUM</b>		43.85080875	
<b>Tnvg(SUM/NVG)</b>		0.900454633	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

F-15 WINDSCREEN (ACRYLIC, PILKINGTON, S/N# A41-0492) @ DESIGN EYE  
 $T_{avg} = 78\%$



**F-15, PILKINGTON, ACRYLIC, S/N# A41-0492, @ DESIGN EYE**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
	READING	"NVIS A"	RESPONSE
450	0.7470327	0.0001	7.47033E-05
455	0.7512263	0.0001125	8.4513E-05
460	0.7485304	0.000123	9.20692E-05
465	0.75	0.0001375	0.000103125
470	0.7496977	0.00015	0.000112455
475	0.748118	0.00016172	0.000120986
480	0.7491658	0.000175	0.000131104
485	0.7531199	0.00019375	0.000145917
490	0.7534598	0.0002125	0.00016011
495	0.7514313	0.00022266	0.000167314
500	0.755007	0.0002375	0.000179314
505	0.7555242	0.00027656	0.000208948
510	0.7546729	0.0003125	0.000235835
515	0.7539266	0.00034279	0.000258438
520	0.7547551	0.000375	0.000283033
525	0.7569147	0.00041875	0.000316958
530	0.7569061	0.0004625	0.000350069
535	0.7583202	0.00050703	0.000384491
540	0.7620331	0.00055	0.000419118
545	0.7583454	0.00058359	0.000442563
550	0.7595246	0.000625	0.000474703
555	0.7571819	0.0007	0.000530027
560	0.758297	0.000775	0.00058768
565	0.7586654	0.00085	0.000644866
570	0.7602009	0.000925	0.000703186
575	0.7596567	0.0014525	0.001103401
580	0.7619337	0.00198	0.001508629
585	0.7628803	0.0047175	0.003598888
590	0.763158	0.0078	0.005952632
595	0.7622069	0.0114	0.008689159
600	0.7616473	0.015	0.01142471
605	0.7641628	0.026263	0.020069208
610	0.7635679	0.052	0.039705531
615	0.7664655	0.088388	0.067746353
620	0.766964	0.175	0.1342187
625	0.7690424	0.43288	0.332903074
630	0.7736702	0.6138	0.474878769
635	0.7745352	0.67756	0.52479407
640	0.7782532	0.7448	0.579642983
645	0.7793646	0.82458	0.642648462
650	0.7816261	0.8897	0.695412741
655	0.7833534	0.89654	0.702307657
660	0.7851048	0.9034	0.709263676
665	0.7837607	0.91051	0.713621955
670	0.7761733	0.9172	0.711906151
675	0.7798913	0.92241	0.719379534
680	0.7827869	0.9276	0.726113128
685	0.7825081	0.93254	0.729720104
690	0.7850947	0.9379	0.736340319
695	0.7875217	0.9448	0.744050502
700	0.7864107	0.9517	0.748427063
705	0.787204	0.9586	0.754613754

710	0.784417	0.9655	0.757354614
715	0.7830846	0.97304	0.761972639
720	0.7819458	0.9793	0.765759522
725	0.7764481	0.9802	0.761074428
730	0.7760077	0.9828	0.762660368
735	0.776751	0.98838	0.767725153
740	0.7749367	0.9931	0.769589637
745	0.7787544	0.99719	0.7765661
750	0.7843659	1	0.7843659
755	0.7844298	1	0.7844298
760	0.7864752	1	0.7864752
765	0.7888156	1	0.7888156
770	0.7884615	1	0.7884615
775	0.7886122	0.99814	0.787145381
780	0.7890848	0.9966	0.786401912
785	0.7879627	0.99543	0.78436171
790	0.7876059	0.9945	0.783274068
795	0.7859718	0.9938	0.781098775
800	0.7854862	0.9931	0.780066345
805	0.7877079	0.9862	0.776837531
810	0.7877079	0.9793	0.771402346
815	0.7875583	0.97283	0.766160341
820	0.7889099	0.9655	0.761692508
825	0.7889528	0.95515	0.753568267
830	0.7896104	0.9448	0.746023906
835	0.7882352	0.93402	0.736227442
840	0.7877309	0.9241	0.727942125
845	0.7866473	0.9172	0.721512904
850	0.7839695	0.9103	0.713647436
855	0.7804781	0.86334	0.673817963
860	0.7752294	0.8	0.62018352
865	0.7620915	0.72848	0.555168416
870	0.7487345	0.6552	0.490570844
875	0.7391514	0.58016	0.428826076
880	0.7201416	0.5034	0.362519281
885	0.6859324	0.42523	0.291679034
890	0.6672474	0.3448	0.230066904
895	0.6548347	0.25704	0.168318711
900	0.6558442	0.175	0.114772735
905	0.676371	0.11009	0.074461683
910	0.6995769	0.0621	0.043443725
915	0.7214077	0.043125	0.031110707
920	0.7501934	0.0276	0.020705338
925	0.7602906	0.015525	0.011803512
930	0.7689713	0.0069	0.005305902
935	0.771836	0	0
940	0.778918	0	0
945	0.7779961	0	0
950	0.7788259	0	0
<b>SUM</b>		37.90262049	
<b>Tnvg(SUM/NVG)</b>		0.778311534	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **F-15**

**Aircraft:** F-15

**Part Name:** Single seat canopy, SWEDLOW

**Manufactured:** N/A

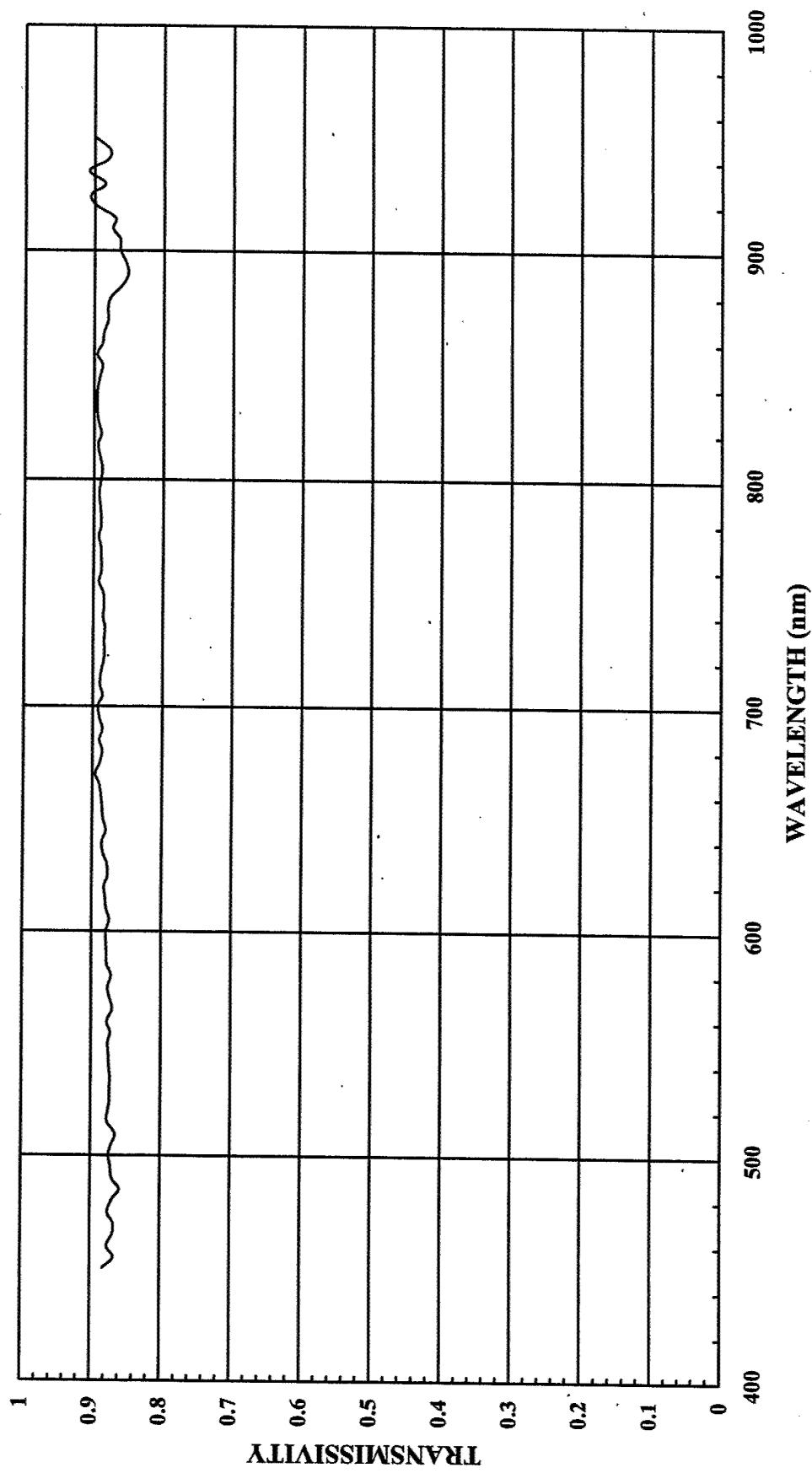
**S/N#** 2442

**Material Type:** Stretched Acrylic

**Construction:** N/A

**Coating:** N/A

F-15 CANOPY (SWEDLOW, SINGLE-SEAT, STRETCHED ACRYLIC, S/N# 2442)  
@ NORMAL  
T<sub>avg</sub> = 89%



**F-15, SINGLE SEAT, SWEDLOW, STRETCHED ACRYLIC, S/N# 2442 @ NORMAL**

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
	READING	"NVIS A"	
450	0.882	0.0001	0.0000882
455	0.8665413	0.0001125	9.74859E-05
460	0.8761063	0.000123	0.000107761
465	0.8681135	0.0001375	0.000119366
470	0.8668831	0.00015	0.000130032
475	0.875	0.00016172	0.000141505
480	0.8688525	0.000175	0.000152049
485	0.8585859	0.00019375	0.000166351
490	0.8693261	0.0002125	0.000184732
495	0.8716304	0.0002266	0.000194077
500	0.874378	0.0002375	0.000207665
505	0.8704857	0.00027656	0.000240742
510	0.865099	0.0003125	0.000270343
515	0.8766158	0.00034279	0.000300495
520	0.8752711	0.000375	0.000328227
525	0.8731959	0.00041875	0.000365651
530	0.8731809	0.0004625	0.000403846
535	0.8729166	0.00050703	0.000442595
540	0.8741044	0.00055	0.000480757
545	0.875	0.00058359	0.000510641
550	0.8762696	0.000625	0.000547669
555	0.8728585	0.0007	0.000611001
560	0.8774423	0.000775	0.000680018
565	0.8701965	0.00085	0.000739667
570	0.8736581	0.000925	0.000808134
575	0.8766129	0.0014525	0.00127328
580	0.8714285	0.00198	0.001725428
585	0.87778747	0.0047175	0.004141374
590	0.8782743	0.0078	0.00685054
595	0.8788321	0.0114	0.010018686
600	0.8792402	0.015	0.013188603
605	0.8746736	0.026263	0.022971553
610	0.8788474	0.052	0.045700065
615	0.8807089	0.088388	0.077844098
620	0.8823943	0.175	0.154419003
625	0.877305	0.43288	0.379767788
630	0.8787249	0.6138	0.539361344
635	0.8844594	0.67756	0.599274311
640	0.8857518	0.7448	0.659707941
645	0.8805875	0.82458	0.726114841
650	0.8846642	0.8897	0.787085739
655	0.8859102	0.89654	0.794253931
660	0.8871829	0.9034	0.801481032
665	0.890118	0.91051	0.81046134
670	0.8962265	0.9172	0.822018946
675	0.8895349	0.92241	0.820515887
680	0.8860244	0.9276	0.821876233
685	0.8903942	0.93254	0.830328207
690	0.8860104	0.9379	0.830989154
695	0.8902992	0.9448	0.841154684
700	0.8926868	0.9517	0.849570028
705	0.8862973	0.9586	0.849604592

710	0.8901024	0.9655	0.859393867
715	0.8886027	0.97304	0.864645971
720	0.8848786	0.9793	0.866561613
725	0.883364	0.9802	0.865873393
730	0.8841387	0.9828	0.868931514
735	0.8830519	0.98838	0.872790837
740	0.88564	0.9931	0.879529084
745	0.8845161	0.99719	0.88203061
750	0.8859103	1	0.8859103
755	0.8923547	1	0.8923547
760	0.8884914	1	0.8884914
765	0.8890845	1	0.8890845
770	0.8894063	1	0.8894063
775	0.892435	0.99814	0.890775071
780	0.8890244	0.9966	0.886001717
785	0.8898906	0.99543	0.8858238
790	0.8915254	0.9945	0.88662201
795	0.8921986	0.9938	0.886666969
800	0.8896346	0.9931	0.883496121
805	0.8879573	0.9862	0.875703489
810	0.8912711	0.9793	0.872821788
815	0.8945249	0.97283	0.870220658
820	0.8896105	0.9655	0.858918938
825	0.8933002	0.95515	0.853235686
830	0.8955349	0.9448	0.846101374
835	0.8957428	0.93402	0.83664169
840	0.8953068	0.9241	0.827353014
845	0.8923221	0.9172	0.81843783
850	0.8881256	0.9103	0.808460734
855	0.8954918	0.86334	0.773113891
860	0.8880517	0.8	0.71044136
865	0.8861331	0.72848	0.645530241
870	0.8801897	0.6552	0.576700291
875	0.8808933	0.58016	0.511059057
880	0.876802	0.5034	0.441382127
885	0.859944	0.42523	0.365673987
890	0.8517964	0.3448	0.293699399
895	0.8546603	0.25704	0.219681884
900	0.8631757	0.175	0.151055748
905	0.8631579	0.11009	0.095025053
910	0.8740876	0.0621	0.05428084
915	0.8707224	0.043125	0.037549904
920	0.8991936	0.0276	0.024817743
925	0.9052631	0.015525	0.01405421
930	0.8847826	0.0069	0.006105
935	0.9078014	0	0
940	0.8822116	0	0
945	0.877551	0	0
950	0.9002696	0	0
<b>SUM:</b>		43.22247335	
<b>T<sub>nv</sub>g(SUM/NVG):</b>		0.887552076	(SPECTRAL TRANSMISSION COEFFICIENT)

# **F-15**

**Aircraft:** F-15

**Part Name:** Dual seat canopy, SWEDLOW

**Manufactured:** N/A

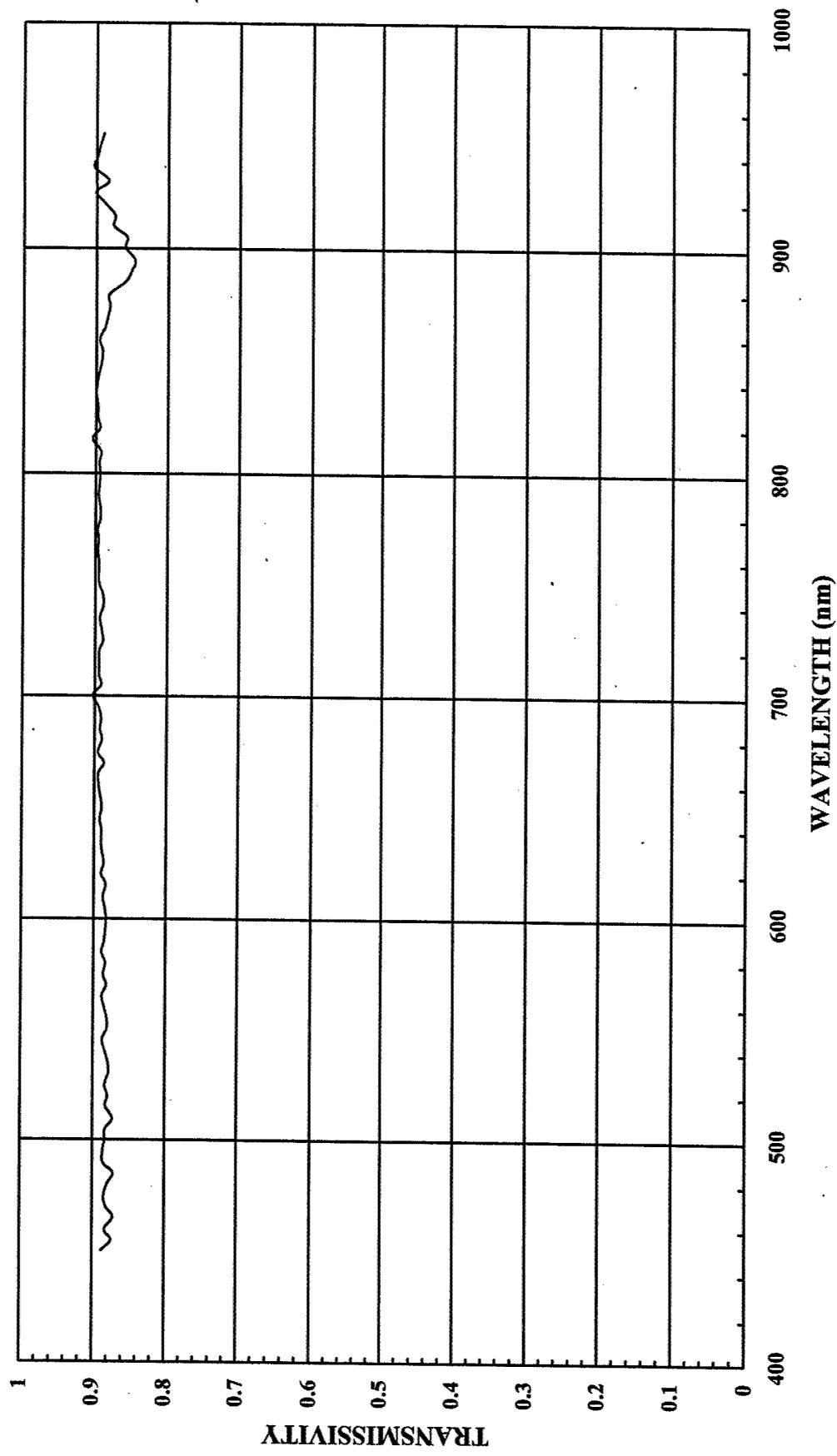
**S/N#** 0390

**Material Type:** N/A

**Construction:** N/A

**Coating:** N/A

F-15 CANOPY (SWEDLOW, DUAL-SEAT, S/N# 0390) @ NORMAL  
 $T_{avg} = 89\%$



**F-15, CANOPY, DUAL SEAT, SWEDLOW, S/N# 0390 @ NORMAL**

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
	READING	"NVIS A"	
450	0.888	0.0001	0.0000888
455	0.8740601	0.0001125	9.83318E-05
460	0.8831859	0.000123	0.000108632
465	0.8714524	0.0001375	0.000119825
470	0.8814935	0.00015	0.000132224
475	0.884375	0.00016172	0.000143021
480	0.8792847	0.000175	0.000153875
485	0.8715729	0.00019375	0.000168867
490	0.8858323	0.0002125	0.000188239
495	0.885751	0.00022266	0.000197221
500	0.8830845	0.0002375	0.000209733
505	0.882939	0.00027656	0.000244186
510	0.8725247	0.0003125	0.000272664
515	0.8824912	0.00034279	0.000302509
520	0.8796096	0.000375	0.000329854
525	0.8835051	0.00041875	0.000369968
530	0.8783783	0.0004625	0.00040625
535	0.8791666	0.00050703	0.000445764
540	0.8833163	0.00055	0.000485824
545	0.8875	0.00058359	0.000517936
550	0.8808864	0.000625	0.000550554
555	0.8809739	0.0007	0.000616682
560	0.8845471	0.000775	0.000685524
565	0.8881298	0.00085	0.00075491
570	0.8819158	0.000925	0.000815772
575	0.8862903	0.0014525	0.001287337
580	0.8833333	0.00198	0.001749
585	0.888977	0.0047175	0.004193749
590	0.885208	0.0078	0.006904622
595	0.8839416	0.0114	0.010076934
600	0.8826323	0.015	0.013239485
605	0.8844647	0.026263	0.023228696
610	0.8873609	0.052	0.046142767
615	0.8834356	0.088388	0.078085106
620	0.8901408	0.175	0.15577464
625	0.8865249	0.43288	0.383758899
630	0.8891199	0.6138	0.545741795
635	0.8898648	0.67756	0.602936794
640	0.8896914	0.7448	0.662642155
645	0.8927203	0.82458	0.736119305
650	0.8897339	0.8897	0.791596251
655	0.8915212	0.89654	0.799284417
660	0.8938584	0.9034	0.807511679
665	0.8945428	0.91051	0.814490165
670	0.8867925	0.9172	0.813366081
675	0.8953488	0.92241	0.825878687
680	0.8900951	0.9276	0.825652215
685	0.8928572	0.93254	0.832625053
690	0.8911917	0.9379	0.835848695
695	0.8939257	0.9448	0.844581001
700	0.9030207	0.9517	0.8594048

705	0.8913994	0.9586	0.854495465
710	0.8948805	0.9655	0.864007123
715	0.894398	0.97304	0.87028503
720	0.894835	0.9793	0.876311916
725	0.8888889	0.9802	0.8712889
730	0.8909541	0.9828	0.875629689
735	0.8936835	0.98838	0.883298898
740	0.8888888	0.9931	0.882755467
745	0.8890322	0.99719	0.88653402
750	0.8946384	1	0.8946384
755	0.8954128	1	0.8954128
760	0.8950507	1	0.8950507
765	0.8967136	1	0.8967136
770	0.8958091	1	0.8958091
775	0.8971632	0.99814	0.895494476
780	0.8932927	0.9966	0.890255505
785	0.893754	0.99543	0.889669544
790	0.8962712	0.9945	0.891341708
795	0.8950354	0.9938	0.889486181
800	0.8941089	0.9931	0.887939549
805	0.8955793	0.9862	0.883220306
810	0.8928025	0.9793	0.874321488
815	0.9049919	0.97283	0.88040327
820	0.8944806	0.9655	0.863621019
825	0.8974358	0.95515	0.857185804
830	0.8972199	0.9448	0.847693362
835	0.9000869	0.93402	0.840699166
840	0.8989169	0.9241	0.830689107
845	0.8960674	0.9172	0.821873019
850	0.892051	0.9103	0.812034025
855	0.8913934	0.86334	0.769575578
860	0.8955867	0.8	0.71646936
865	0.887372	0.72848	0.646432755
870	0.8837485	0.6552	0.579032017
875	0.8808933	0.58016	0.511059057
880	0.8820446	0.5034	0.444021252
885	0.859944	0.42523	0.365673987
890	0.8517964	0.3448	0.293699399
895	0.8467615	0.25704	0.217651576
900	0.8597973	0.175	0.150464528
905	0.8578947	0.11009	0.094445628
910	0.8759124	0.0621	0.05439416
915	0.8745247	0.043125	0.037713878
920	0.8891129	0.0276	0.024539516
925	0.9010527	0.015525	0.013988843
930	0.8826087	0.0069	0.00609
935	0.9030733	0	0
940	0.8990384	0	0
945	0.8954081	0	0
950	0.8894879	0	0
<b>SUM:</b>		43.45393766	
<b>Tnvg(SUM/NVG):</b>		0.892305081	(SPECTRAL TRANSMISSION COEFFICIENT)

# **F – 16**

**Aircraft:** F – 16

**Part Name:** Canopy, A/C Type, TEXSTARS

**Manufactured:** 1/12/81

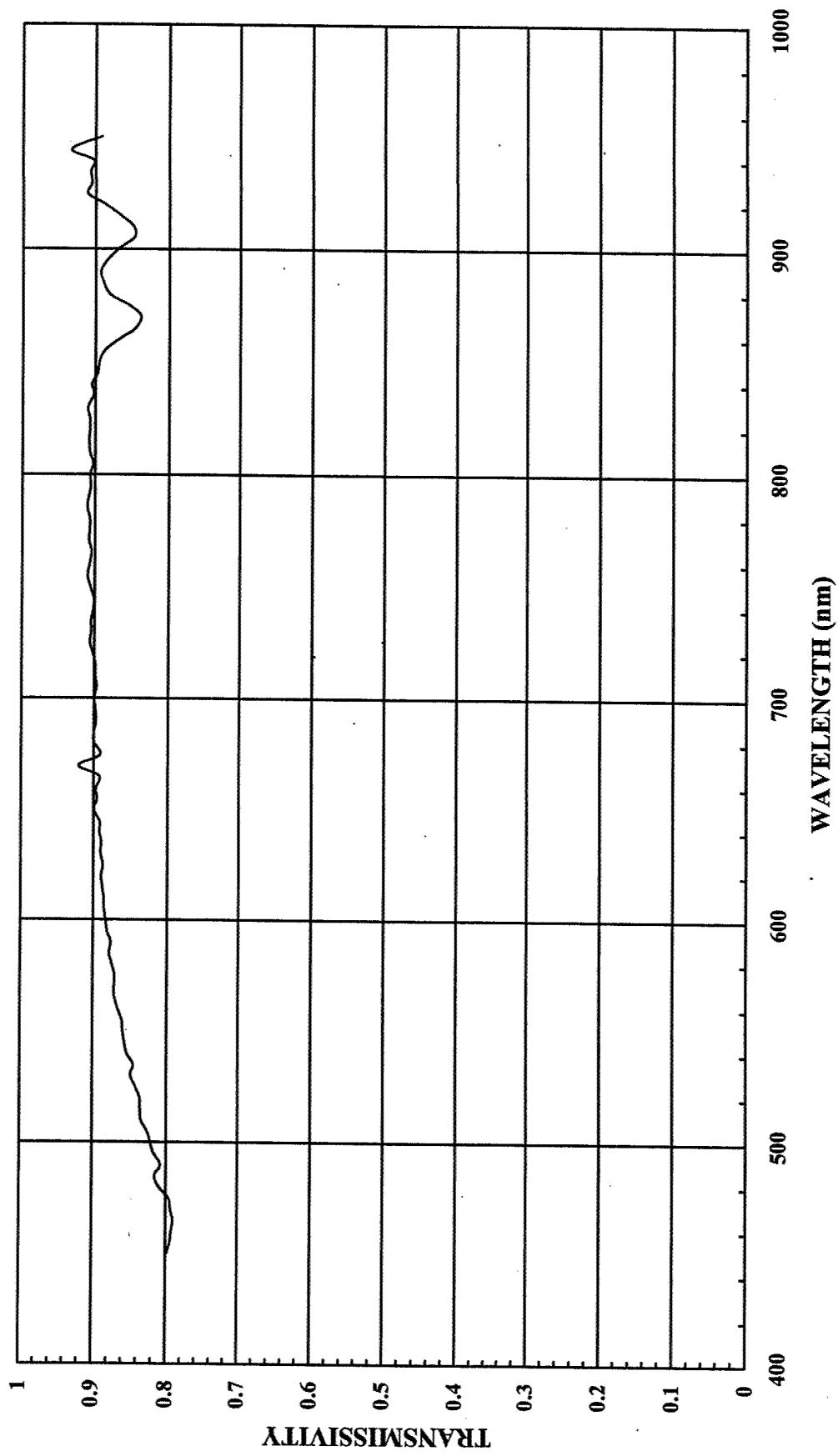
**S/N#** 138

**Material Type:** N/A

**Construction:** N/A

**Coating:** N/A

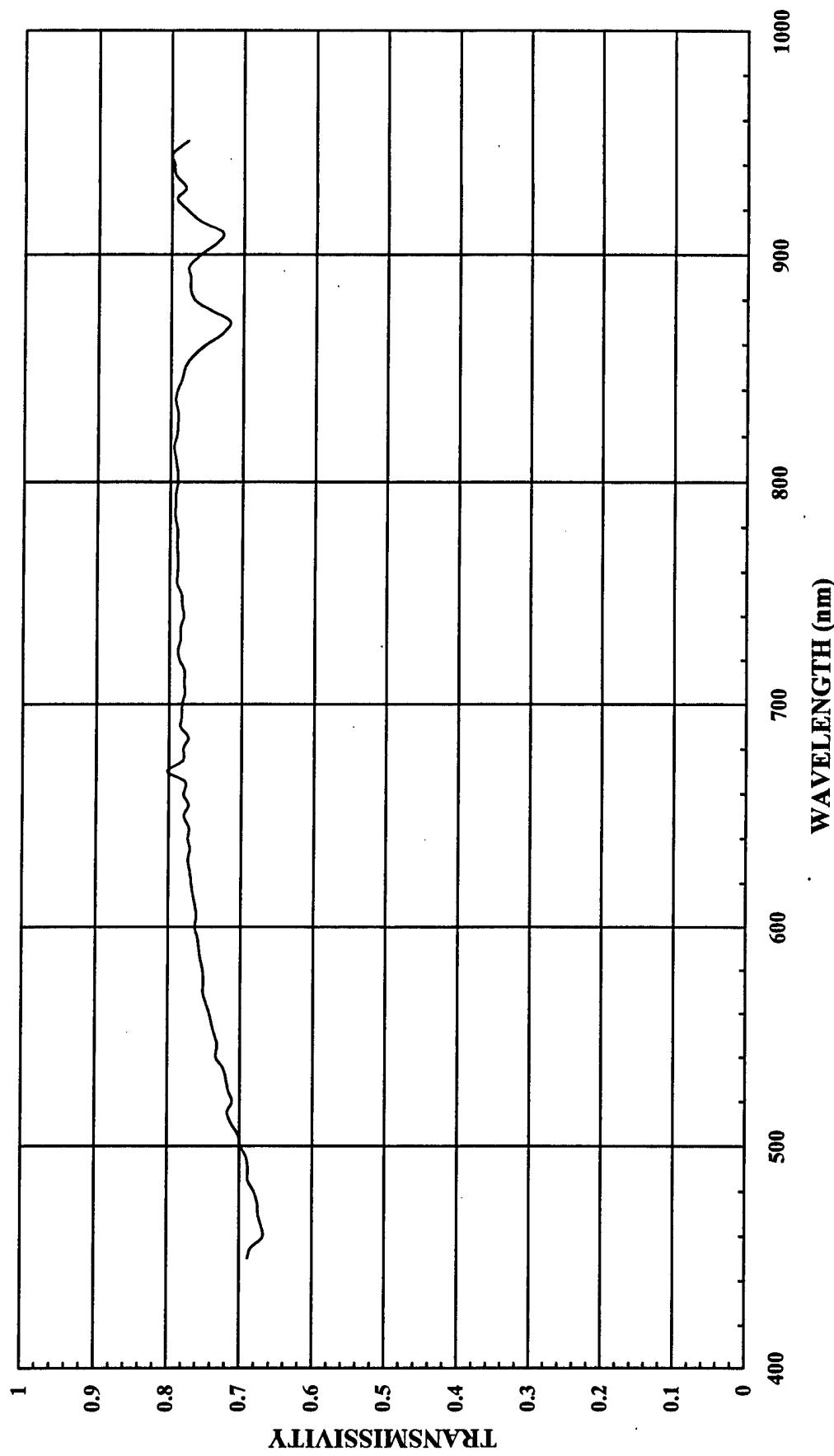
F-16 CANOPY (TEXSTARS, A/C TYPE, S/N# 138, MFG 1/12/81) @ NORMAL  
T<sub>avg</sub> = 90%



<u>F-16, TEXSTARS, CANOPY, A/C TYPE, S/N# 138 @ NORMAL</u>			
	<u>SPECTRA- RADIOMETRIC</u>	<u>RELATIVE SPECTRAL SENSITIVITY</u>	<u>NVG SPECTRAL RESPONSE</u>
<u>WAVELENGTH(nm)</u>	<u>READING</u>	<u>"NVIS A"</u>	
450	0.7983539	0.0001	7.98354E-05
455	0.7945736	0.0001125	8.93895E-05
460	0.7927928	0.000123	9.75135E-05
465	0.7905405	0.0001375	0.000108699
470	0.7937293	0.00015	0.000119059
475	0.7958861	0.00016172	0.000128711
480	0.810687	0.000175	0.00014187
485	0.8154762	0.00019375	0.000157999
490	0.8078542	0.0002125	0.000171669
495	0.8177084	0.00022266	0.000182071
500	0.8217446	0.0002375	0.000195164
505	0.8260869	0.00027656	0.000228463
510	0.8337563	0.0003125	0.000260549
515	0.8359096	0.00034279	0.000286541
520	0.8360837	0.000375	0.000313531
525	0.841553	0.00041875	0.0003524
530	0.8489362	0.0004625	0.000392633
535	0.845175	0.00050703	0.000428529
540	0.8534303	0.00055	0.000469387
545	0.8575609	0.00058359	0.000500464
550	0.8595506	0.000625	0.000537219
555	0.8608058	0.0007	0.000602564
560	0.8662478	0.000775	0.000671342
565	0.8713043	0.00085	0.000740609
570	0.8715366	0.000925	0.000806171
575	0.8708095	0.0014525	0.001264851
580	0.8751008	0.00198	0.0017327
585	0.8783026	0.0047175	0.004143393
590	0.8761683	0.0078	0.006834113
595	0.8812684	0.0114	0.01004646
600	0.8835616	0.015	0.013253424
605	0.8855582	0.026263	0.02325804
610	0.8859417	0.052	0.046068968
615	0.8881215	0.088388	0.078499283
620	0.8897582	0.175	0.155707685
625	0.8873745	0.43288	0.384126674
630	0.8906798	0.6138	0.546699261
635	0.8896458	0.67756	0.602788408
640	0.8921958	0.7448	0.664507432
645	0.8916828	0.82458	0.735263803
650	0.899743	0.8897	0.800501347
655	0.8959646	0.89654	0.803268102
660	0.8973666	0.9034	0.810680986
665	0.8929099	0.91051	0.813003393
670	0.9207921	0.9172	0.844550514
675	0.8917748	0.92241	0.822581993
680	0.9	0.9276	0.83484
685	0.9	0.93254	0.839286
690	0.8976215	0.9379	0.841879205

695	0.8983666	0.9448	0.848776764
700	0.9	0.9517	0.85653
705	0.8967789	0.9586	0.859652254
710	0.8985607	0.9655	0.867560356
715	0.8992248	0.97304	0.874981699
720	0.902378	0.9793	0.883698775
725	0.9063275	0.9802	0.888382216
730	0.9044347	0.9828	0.888878423
735	0.904852	0.98838	0.89433762
740	0.9018325	0.9931	0.895609856
745	0.9011703	0.99719	0.898638011
750	0.9065244	1	0.9065244
755	0.9099877	1	0.9099877
760	0.9075075	1	0.9075075
765	0.9046498	1	0.9046498
770	0.9081334	1	0.9081334
775	0.9075179	0.99814	0.905829917
780	0.9071912	0.9966	0.90410675
785	0.9108073	0.99543	0.906644911
790	0.9089041	0.9945	0.903905127
795	0.9062276	0.9938	0.900608989
800	0.906767	0.9931	0.900510308
805	0.902682	0.9862	0.890224988
810	0.9074074	0.9793	0.888624067
815	0.908576	0.97283	0.88388999
820	0.9074529	0.9655	0.876145775
825	0.9078839	0.95515	0.867165307
830	0.9103215	0.9448	0.860071753
835	0.9021834	0.93402	0.842657339
840	0.9047187	0.9241	0.836050551
845	0.8973634	0.9172	0.82306171
850	0.8947368	0.9103	0.814478909
855	0.8869295	0.86334	0.765721715
860	0.8683926	0.8	0.69471408
865	0.8469387	0.72848	0.616977904
870	0.8389021	0.6552	0.549648656
875	0.8546366	0.58016	0.49582597
880	0.8801054	0.5034	0.443045058
885	0.8896747	0.42523	0.378316373
890	0.8933934	0.3448	0.308042044
895	0.8853503	0.25704	0.227570441
900	0.8677966	0.175	0.151864405
905	0.8485915	0.11009	0.093421438
910	0.8482633	0.0621	0.052677151
915	0.8642447	0.043125	0.037270553
920	0.8877756	0.0276	0.024502607
925	0.9110169	0.015525	0.014143537
930	0.9054946	0.0069	0.006247913
935	0.9065421	0	0
940	0.9029127	0	0
945	0.9329897	0	0
950	0.8913043	0	0
<b>SUM</b>		43.75066343	
<b>Tnvg(SUM/NVG)</b>		0.898398198	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

F-16 CANOPY (TEXSTARS, A/C TYPE, S/N# 138, MFG 1/12/88) @ DESIGN EYE  
T<sub>avg</sub> = 78%



**F-16, TEXSTARS, CANOPY, A/C TYPE, S/N# 138 @ DESIGN EYE**

WAVELENGTH(nm)	<u>SPECTRA-</u>	<u>RELATIVE</u>	<u>NVG</u>
	<u>RADIOMETRIC</u>	<u>SPECTRAL SENSITIVITY</u>	<u>SPECTRAL</u>
	<u>READING</u>	<u>"NVIS A"</u>	<u>RESPONSE</u>
450	0.6893004	0.0001	6.893E-05
455	0.6841085	0.0001125	7.69622E-05
460	0.6684685	0.000123	8.22216E-05
465	0.6706081	0.0001375	9.22086E-05
470	0.6749175	0.00015	0.000101238
475	0.675633	0.00016172	0.000109263
480	0.680916	0.000175	0.00011916
485	0.6889881	0.00019375	0.000133491
490	0.6886396	0.0002125	0.000146336
495	0.6914063	0.00022266	0.000153949
500	0.699115	0.0002375	0.00016604
505	0.702046	0.00027656	0.000194158
510	0.7106599	0.0003125	0.000222081
515	0.7170036	0.00034279	0.000245782
520	0.7106711	0.000375	0.000266502
525	0.7156348	0.00041875	0.000299672
530	0.7191489	0.0004625	0.000332606
535	0.7232237	0.00050703	0.000366696
540	0.7328482	0.00055	0.000403067
545	0.7317073	0.00058359	0.000427017
550	0.7350187	0.000625	0.000459387
555	0.739011	0.0007	0.000517308
560	0.7423699	0.000775	0.000575337
565	0.7478261	0.00085	0.000635652
570	0.7514694	0.000925	0.000695109
575	0.7506133	0.0014525	0.001090266
580	0.7518131	0.00198	0.00148859
585	0.755004	0.0047175	0.003561731
590	0.7570093	0.0078	0.005904673
595	0.7594752	0.0114	0.008658017
600	0.7630137	0.015	0.011445206
605	0.760582	0.026263	0.019975165
610	0.7625995	0.052	0.039655174
615	0.765884	0.088388	0.067694955
620	0.7681366	0.175	0.134423905
625	0.7697274	0.43288	0.333199597
630	0.7729503	0.6138	0.474436894
635	0.770436	0.67756	0.522016616
640	0.7731481	0.7448	0.575840705
645	0.7717602	0.82458	0.636378026
650	0.7789203	0.8897	0.693005391
655	0.7723833	0.89654	0.692472524
660	0.7792032	0.9034	0.703932171
665	0.7769572	0.91051	0.7074273
670	0.8019803	0.9172	0.735576331
675	0.7806638	0.92241	0.720092096
680	0.7797297	0.9276	0.72327727
685	0.7731708	0.93254	0.721012698
690	0.7838676	0.9379	0.735189422

695	0.7822141	0.9448	0.739035882
700	0.781746	0.9517	0.743987668
705	0.7781845	0.9586	0.745967662
710	0.7793009	0.9655	0.752415019
715	0.7790698	0.97304	0.758066078
720	0.7859825	0.9793	0.769712662
725	0.7878412	0.9802	0.772241944
730	0.784375	0.9828	0.77088375
735	0.7844991	0.98838	0.77538322
740	0.7801047	0.9931	0.774721978
745	0.7821847	0.99719	0.779986761
750	0.7835633	1	0.7835633
755	0.7897657	1	0.7897657
760	0.7891892	1	0.7891892
765	0.7886993	1	0.7886993
770	0.7899356	1	0.7899356
775	0.7899761	0.99814	0.788506744
780	0.7897972	0.9966	0.78711189
785	0.7929688	0.99543	0.789344933
790	0.7924658	0.9945	0.788107238
795	0.7924123	0.9938	0.787499344
800	0.7894737	0.9931	0.784026331
805	0.7900383	0.9862	0.779135771
810	0.7924383	0.9793	0.776034827
815	0.7953075	0.97283	0.773698995
820	0.7911548	0.9655	0.763859959
825	0.7900415	0.95515	0.754608139
830	0.7893401	0.9448	0.745768526
835	0.7930131	0.93402	0.740690096
840	0.7903811	0.9241	0.730391175
845	0.7843691	0.9172	0.719423339
850	0.7795432	0.9103	0.709618175
855	0.7686722	0.86334	0.663625457
860	0.7518877	0.8	0.60151016
865	0.7301587	0.72848	0.53190601
870	0.7183771	0.6552	0.470680676
875	0.7431078	0.58016	0.431121421
880	0.7667984	0.5034	0.386006315
885	0.7736917	0.42523	0.328996922
890	0.7732733	0.3448	0.266624634
895	0.7754776	0.25704	0.199328762
900	0.7576271	0.175	0.132584743
905	0.737676	0.11009	0.081210751
910	0.7294333	0.0621	0.045297808
915	0.7590822	0.043125	0.03273542
920	0.7795592	0.0276	0.021515834
925	0.7923729	0.015525	0.012301589
930	0.7802198	0.0069	0.005383517
935	0.7943925	0	0
940	0.7961165	0	0
945	0.7989691	0	0
950	0.7771739	0	0
<b>SUM</b>		38.02685612	
<b>Tnvg(SUM/NVG)</b>		0.780862651	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **F – 16**

**Aircraft:** F – 16

**Part Name:** Canopy, Left Side, TEXSTARS

**Manufactured:** N/A

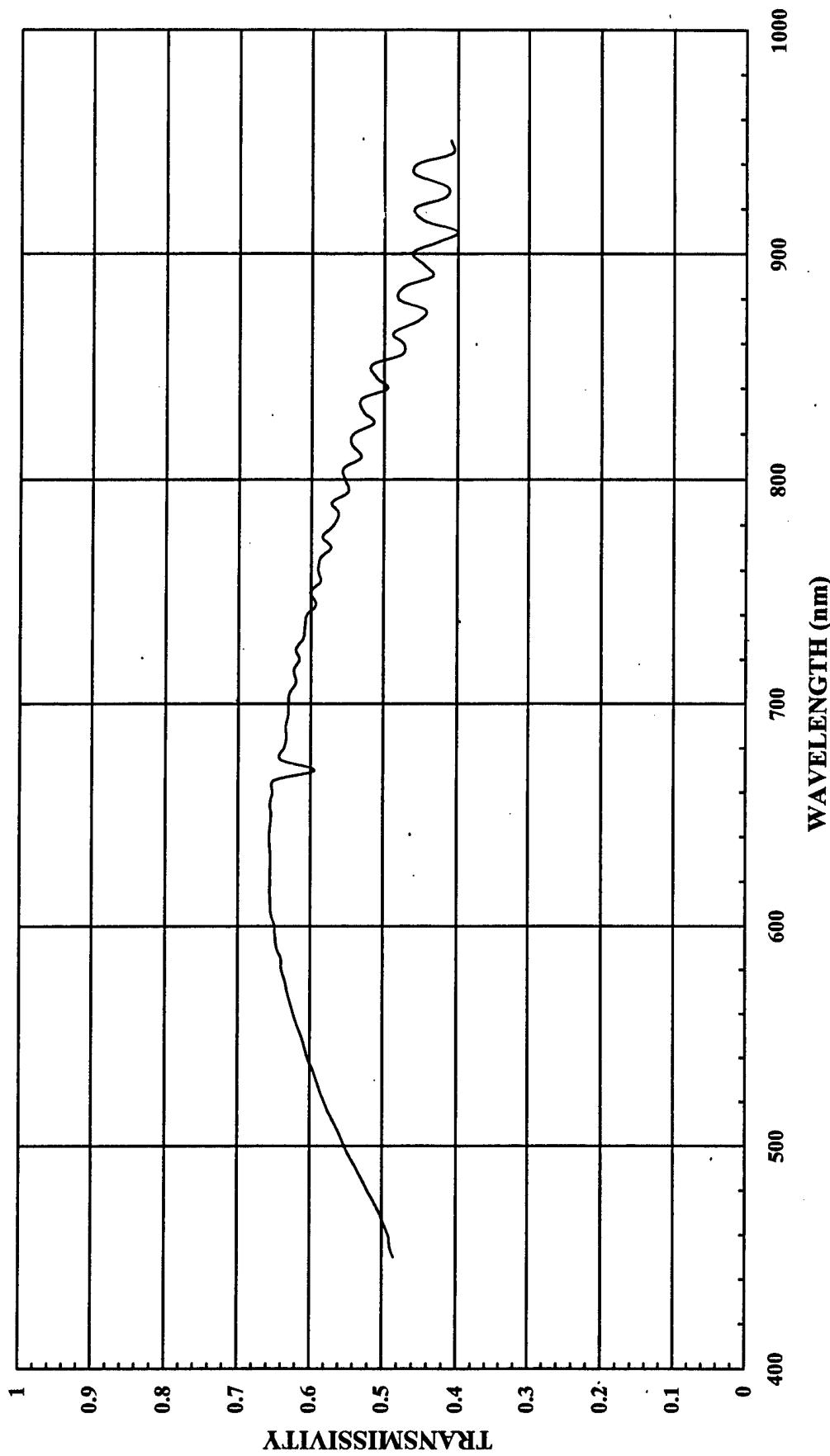
**S/N#** 0501

**Material Type:** N/A

**Construction:** N/A

**Coating:** Gold Coat

F-16 CANOPY (TEXSTARS, LEFT SIDE, GOLD COAT, S/N# 0501) @ NORMAL  
 $T_{avg} = 58\%$



**F-16, CANOPY, LEFT SIDE, TEXSTARS, GOLD COAT, S/N# 0501 @ NORMAL**

<u>WAVELENGTH(nm)</u>	<u>SPECTRA- RADIOMETRIC READING</u>	<u>RELATIVE SPECTRAL SENSITIVITY "NVIS A"</u>	<u>NVG SPECTRAL RESPONSE</u>
450	0.4846847	0.0001	4.84685E-05
455	0.4897785	0.0001125	5.51001E-05
460	0.4912699	0.000123	6.04262E-05
465	0.4981301	0.0001375	6.84929E-05
470	0.5036284	0.00015	7.55443E-05
475	0.5111732	0.00016172	8.26669E-05
480	0.5206392	0.000175	9.11119E-05
485	0.527922	0.00019375	0.000102285
490	0.5350554	0.0002125	0.000113699
495	0.5450399	0.00022266	0.000121359
500	0.5521811	0.0002375	0.000131143
505	0.5580233	0.00027656	0.000154327
510	0.5649278	0.0003125	0.00017654
515	0.5737363	0.00034279	0.000196671
520	0.5799131	0.000375	0.000217467
525	0.5859051	0.00041875	0.000245348
530	0.591628	0.0004625	0.000273628
535	0.596442	0.00050703	0.000302414
540	0.6031022	0.00055	0.000331706
545	0.6083226	0.00058359	0.000355011
550	0.6124638	0.000625	0.00038279
555	0.6182405	0.0007	0.000432768
560	0.6229249	0.000775	0.000482767
565	0.6282101	0.00085	0.000533979
570	0.6320475	0.000925	0.000584644
575	0.6349207	0.0014525	0.000922222
580	0.6404855	0.00198	0.001268161
585	0.6406804	0.0047175	0.00302241
590	0.6468556	0.0078	0.005045474
595	0.6491115	0.0114	0.007399871
600	0.6497415	0.015	0.009746123
605	0.6546361	0.026263	0.017192708
610	0.6557619	0.052	0.034099619
615	0.6567394	0.088388	0.058047882
620	0.6562995	0.175	0.114852413
625	0.6564201	0.43288	0.284151133
630	0.6561128	0.6138	0.402722037
635	0.6570817	0.67756	0.445212277
640	0.6578556	0.7448	0.489970851
645	0.6566948	0.82458	0.541497398
650	0.654954	0.8897	0.582712574
655	0.6566316	0.89654	0.588696495
660	0.6529555	0.9034	0.589879999
665	0.6508895	0.91051	0.592641399
670	0.5942983	0.9172	0.545090401
675	0.6418605	0.92241	0.592058544
680	0.6369308	0.9276	0.59081701
685	0.6337633	0.93254	0.591009628
690	0.6348074	0.9379	0.59538586

695	0.6317974	0.9448	0.596922184
700	0.6313113	0.9517	0.600818964
705	0.6296917	0.9586	0.603622464
710	0.620776	0.9655	0.599359228
715	0.6235573	0.97304	0.606746195
720	0.6161992	0.9793	0.603443877
725	0.6209242	0.9802	0.608629901
730	0.6108894	0.9828	0.600382102
735	0.6086456	0.98838	0.601573138
740	0.6061787	0.9931	0.601996067
745	0.5934426	0.99719	0.591775026
750	0.6010363	1	0.6010363
755	0.5868889	1	0.5868889
760	0.589942	1	0.589942
765	0.5873102	1	0.5873102
770	0.5724697	1	0.5724697
775	0.584387	0.99814	0.58330004
780	0.5699261	0.9966	0.567988351
785	0.5620876	0.99543	0.55951886
790	0.5716093	0.9945	0.568465449
795	0.5488572	0.9938	0.545454285
800	0.554242	0.9931	0.55041773
805	0.5553972	0.9862	0.547732719
810	0.5313283	0.9793	0.520329804
815	0.5446362	0.97283	0.529838434
820	0.5414448	0.9655	0.522764954
825	0.5142747	0.95515	0.49120948
830	0.5282574	0.9448	0.499097592
835	0.5309446	0.93402	0.495912875
840	0.4955789	0.9241	0.457964461
845	0.5103388	0.9172	0.468082747
850	0.5171137	0.9103	0.470728601
855	0.476649	0.86334	0.411510148
860	0.4737374	0.8	0.37898992
865	0.4880889	0.72848	0.355563002
870	0.4532737	0.6552	0.296984928
875	0.4442488	0.58016	0.257735384
880	0.4802956	0.5034	0.241780805
885	0.4731254	0.42523	0.201187114
890	0.4350283	0.3448	0.149997758
895	0.4451902	0.25704	0.114431689
900	0.4614774	0.175	0.080758545
905	0.4288079	0.11009	0.047207462
910	0.4005146	0.0621	0.024871957
915	0.4458484	0.043125	0.019227212
920	0.4588458	0.0276	0.012664144
925	0.4188119	0.015525	0.006502055
930	0.4146846	0.0069	0.002861324
935	0.4589266	0	0
940	0.4547537	0	0
945	0.4081632	0	0
950	0.4094993	0	0
<b>SUM</b>		28.22305892	
<b>Tnvg(SUM/NVG)</b>		0.579546532	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **F-16**

**Aircraft:** F-16

**Part Name:** Canopy, 'A/B TYPE', SIERRACIN

**Manufactured:** 6/85

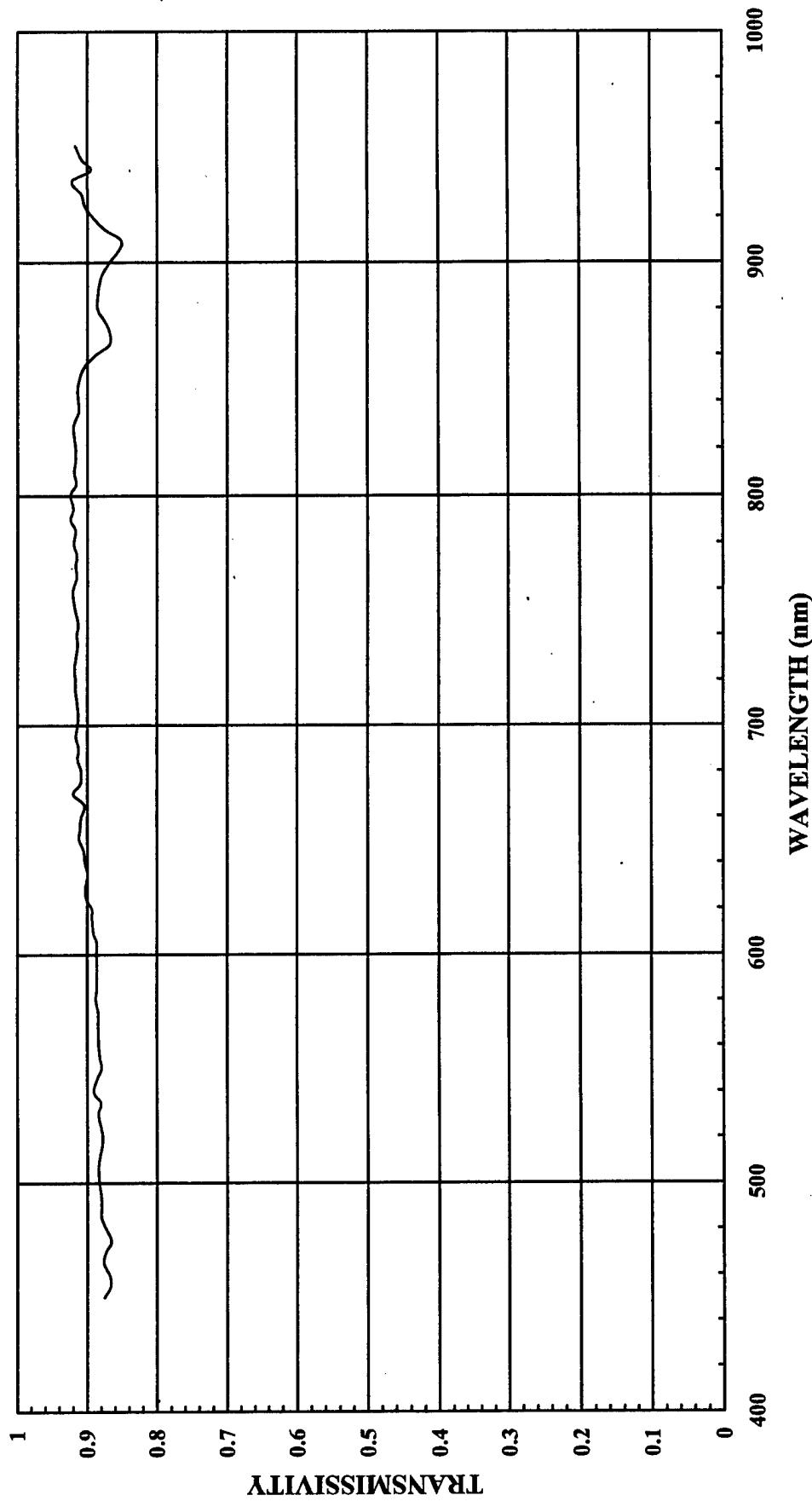
**S/N#** 0214

**Material Type:** Acrylic/Silicone/Polycarbonate

**Construction:** N/A

**Coating:** Clear Coat

F-16 CANOPY (SIERRACIN, A/B, ACRYLIC/SILICONE/POLYCARBONATE,  
CLEAR-COAT, S/N# 0214) @ NORMAL  
 $T_{avg} = 91\%$

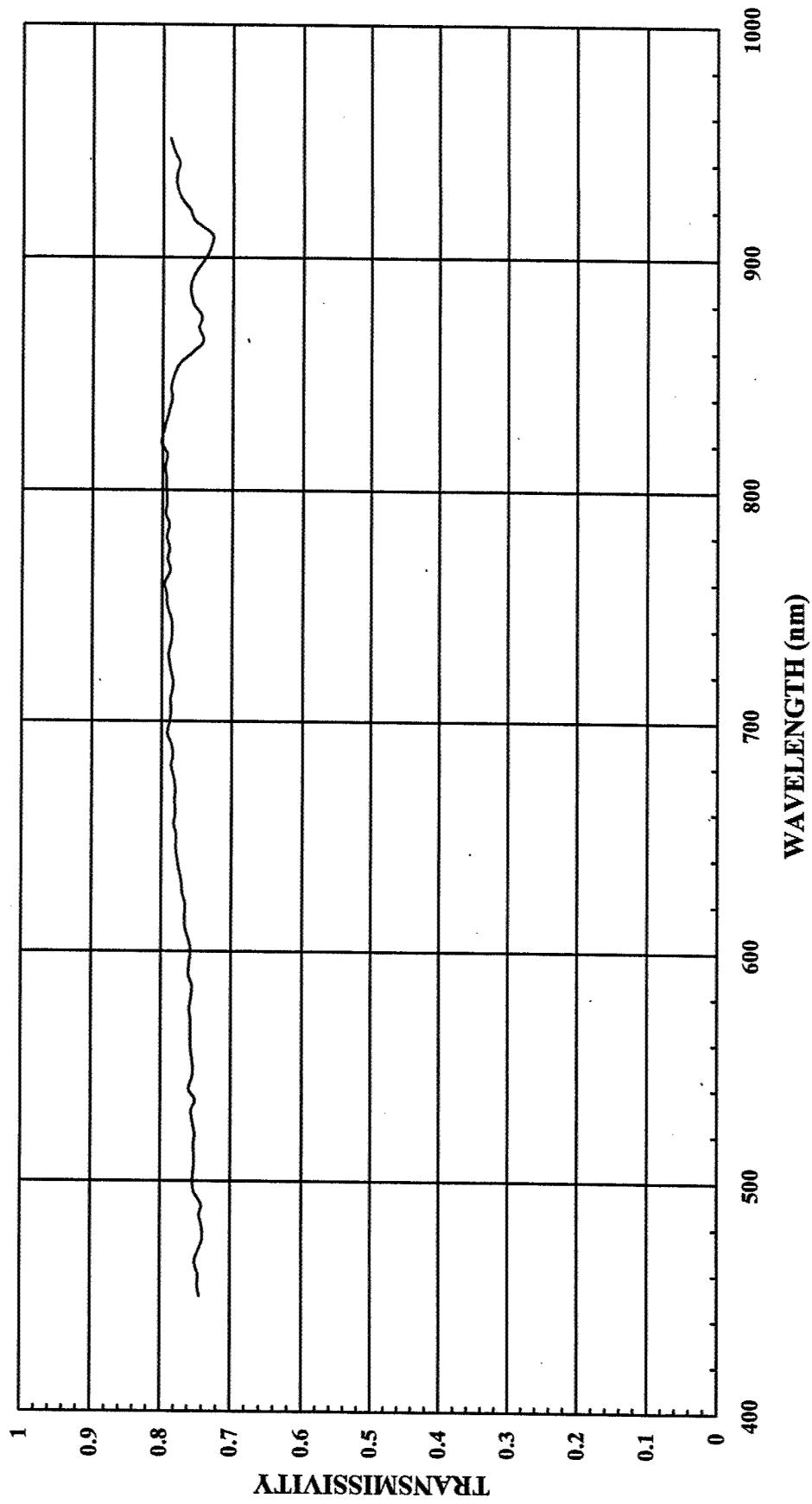


**F-16, A/B CANOPY, SIERRACIN, ACRYLIC/SILICONE/POLYCARBONATE,  
CLEAR-COAT, S/N# 0214 @ NORMAL**

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC READING	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
450	0.8757763	0.0001	8.75776E-05
455	0.8671875	0.0001125	9.75586E-05
460	0.8681319	0.000123	0.00010678
465	0.8767361	0.0001375	0.000120551
470	0.8735245	0.00015	0.000131029
475	0.8658147	0.00016172	0.00014002
480	0.8738462	0.000175	0.000152923
485	0.88006	0.00019375	0.000170512
490	0.8797737	0.0002125	0.000186952
495	0.8809524	0.00022266	0.000196153
500	0.8830334	0.0002375	0.00020972
505	0.883721	0.00027656	0.000244402
510	0.8831835	0.0003125	0.000275995
515	0.8798077	0.00034279	0.000301589
520	0.8780488	0.000375	0.000329268
525	0.8808511	0.00041875	0.000368856
530	0.8841202	0.0004625	0.000408906
535	0.8805167	0.00050703	0.000446448
540	0.8905263	0.00055	0.000489789
545	0.8862512	0.00058359	0.000517207
550	0.8795066	0.000625	0.000549692
555	0.8822984	0.0007	0.000617609
560	0.8838475	0.000775	0.000684982
565	0.8841089	0.00085	0.000751493
570	0.8847457	0.000925	0.00081839
575	0.884743	0.0014525	0.001285089
580	0.8880719	0.00198	0.001758382
585	0.8864558	0.0047175	0.004181855
590	0.8870458	0.0078	0.006918957
595	0.8861607	0.0114	0.010102232
600	0.8867403	0.015	0.013301105
605	0.8865154	0.026263	0.023282554
610	0.8916554	0.052	0.046366081
615	0.8933333	0.088388	0.078959944
620	0.8939394	0.175	0.156439395
625	0.9017467	0.43288	0.390348111
630	0.9019887	0.6138	0.553640664
635	0.8994491	0.67756	0.609430732
640	0.9034852	0.7448	0.672915777
645	0.905599	0.82458	0.746738823
650	0.9115735	0.8897	0.811026943
655	0.9104286	0.89654	0.816235657
660	0.909153	0.9034	0.82132882
665	0.9043348	0.91051	0.823405879
670	0.92	0.9172	0.843824
675	0.9098837	0.92241	0.839285824
680	0.909337	0.9276	0.843501001
685	0.9138991	0.93254	0.852247467
690	0.9123173	0.9379	0.855662396
695	0.9164371	0.9448	0.865849772
700	0.914194	0.9517	0.87003843
705	0.9133975	0.9586	0.875582844
710	0.9148789	0.9655	0.883315578
715	0.9169391	0.97304	0.892218422
720	0.9169309	0.9793	0.89795043

725	0.9182389	0.9802	0.90005777
730	0.916614	0.9828	0.900848239
735	0.9140674	0.98838	0.903445937
740	0.9151193	0.9931	0.90804977
745	0.9133289	0.99719	0.910762446
750	0.9170886	1	0.9170886
755	0.9198757	1	0.9198757
760	0.9204131	1	0.9204131
765	0.9152342	1	0.9152342
770	0.9171107	1	0.9171107
775	0.9152135	0.99814	0.913511203
780	0.9194253	0.9966	0.916299254
785	0.9171053	0.99543	0.912914129
790	0.9241475	0.9945	0.919064689
795	0.9202899	0.9938	0.914584103
800	0.9244274	0.9931	0.918048851
805	0.916084	0.9862	0.903442041
810	0.9188768	0.9793	0.89985605
815	0.9167346	0.97283	0.891826921
820	0.9170125	0.9655	0.885375569
825	0.9191239	0.95515	0.877901193
830	0.9196581	0.9448	0.868892973
835	0.9125442	0.93402	0.852334534
840	0.912844	0.9241	0.84355914
845	0.913958	0.9172	0.838282278
850	0.9104628	0.9103	0.828794287
855	0.9036649	0.86334	0.780170055
860	0.8884026	0.8	0.71072208
865	0.8681192	0.72848	0.632407475
870	0.8689321	0.6552	0.569324312
875	0.8762626	0.58016	0.50837251
880	0.8853334	0.5034	0.445676834
885	0.8855508	0.42523	0.376562767
890	0.8836141	0.3448	0.304670142
895	0.879227	0.25704	0.225996508
900	0.8679246	0.175	0.151886805
905	0.855615	0.11009	0.094194655
910	0.8518518	0.0621	0.052899997
915	0.8762089	0.043125	0.037786509
920	0.8936605	0.0276	0.02466503
925	0.9044586	0.015525	0.01404172
930	0.908686	0.0069	0.006269933
935	0.9219859	0	0
940	0.8951219	0	0
945	0.9081632	0	0
950	0.9168975	0	0
<b>SUM:</b>		44.34952378	
<b>T<sub>nv</sub>g(SUM/NVG):</b>		0.910695499	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

F-16 CANOPY (SIERRACIN, A/B, ACRYLIC/SILICONE/POLYCARBONATE,  
CLEAR-COAT, S/N# 0214) @ DESIGN EYE  
 $T_{nvg} = 78\%$



**F-16, A/B CANOPY, SIERRACIN, ACRYLIC/SILICONE/POLYCARBONATE,**

**CLEAR-COAT, S/N# 0214 @ DESIGN EYE**

<b>WAVELENGTH(nm)</b>	<b>SPECTRA- RADIOMETRIC READING</b>	<b>RELATIVE SPECTRAL SENSITIVITY "NVIS A"</b>	<b>NVG SPECTRAL RESPONSE</b>
450	0.7432712	0.0001	7.43271E-05
455	0.7460938	0.0001125	8.39356E-05
460	0.7454212	0.000123	9.16868E-05
465	0.75	0.0001375	0.000103125
470	0.7453626	0.00015	0.000111804
475	0.7396166	0.00016172	0.000119611
480	0.74	0.000175	0.0001295
485	0.7436282	0.00019375	0.000144078
490	0.7411599	0.0002125	0.000157496
495	0.7513227	0.00022266	0.00016729
500	0.7532134	0.0002375	0.000178888
505	0.751938	0.00027656	0.000207956
510	0.7509627	0.0003125	0.000234676
515	0.7524038	0.00034279	0.000257916
520	0.7505543	0.000375	0.000281458
525	0.7531915	0.00041875	0.000315399
530	0.7553648	0.0004625	0.000349356
535	0.7502691	0.00050703	0.000380409
540	0.7589473	0.00055	0.000417421
545	0.7537092	0.00058359	0.000439857
550	0.7533207	0.000625	0.000470825
555	0.755329	0.0007	0.00052873
560	0.7568058	0.000775	0.000586524
565	0.7568042	0.00085	0.000643284
570	0.7567796	0.000925	0.000700021
575	0.7587065	0.0014525	0.001102021
580	0.7557189	0.00198	0.001496323
585	0.755069	0.0047175	0.003562038
590	0.7598736	0.0078	0.005927014
595	0.7589285	0.0114	0.008651785
600	0.7569061	0.015	0.011353592
605	0.7596796	0.026263	0.019951465
610	0.7644683	0.052	0.039752352
615	0.765614	0.088388	0.06767109
620	0.7647908	0.175	0.13383839
625	0.7692868	0.43288	0.33300887
630	0.7705966	0.6138	0.472992193
635	0.7741047	0.67756	0.524502381
640	0.7768096	0.7448	0.57856779
645	0.7787958	0.82458	0.642179441
650	0.7782835	0.8897	0.69243883
655	0.7824696	0.89654	0.701515295
660	0.7800547	0.9034	0.704701416
665	0.7810165	0.91051	0.711123333
670	0.78	0.9172	0.715416
675	0.7819768	0.92241	0.72130322
680	0.7861975	0.9276	0.729276801
685	0.7835178	0.93254	0.730661689
690	0.7860126	0.9379	0.737201218
695	0.7915518	0.9448	0.747858141
700	0.7882919	0.9517	0.750217401
705	0.7868246	0.9586	0.754250062
710	0.7875432	0.9655	0.76037296

715	0.7835186	0.97304	0.762394939
720	0.785669	0.9793	0.769405652
725	0.7886792	0.9802	0.773063352
730	0.7902717	0.9828	0.776679027
735	0.7861235	0.98838	0.776988745
740	0.7851459	0.9931	0.779728393
745	0.7866054	0.99719	0.784395039
750	0.7924051	1	0.7924051
755	0.7931677	1	0.7931677
760	0.7964762	1	0.7964762
765	0.7883818	1	0.7883818
770	0.7921847	1	0.7921847
775	0.789537	0.99814	0.788068461
780	0.7932542	0.9966	0.790557136
785	0.7901316	0.99543	0.786520699
790	0.7954071	0.9945	0.791032361
795	0.7934783	0.9938	0.788558735
800	0.7938931	0.9931	0.788415238
805	0.7940948	0.9862	0.783136292
810	0.7964119	0.9793	0.779926174
815	0.7934694	0.97283	0.771910836
820	0.8016598	0.9655	0.774002537
825	0.7986521	0.95515	0.762832553
830	0.7948717	0.9448	0.750994782
835	0.7897527	0.93402	0.737644817
840	0.7862385	0.9241	0.726562998
845	0.7877629	0.9172	0.722536132
850	0.7826962	0.9103	0.712488351
855	0.773822	0.86334	0.668071485
860	0.7560175	0.8	0.604814
865	0.7419724	0.72848	0.540512054
870	0.7475728	0.6552	0.489809699
875	0.7436869	0.58016	0.431457392
880	0.7546667	0.5034	0.379899217
885	0.7596567	0.42523	0.323028819
890	0.7580398	0.3448	0.261372123
895	0.7504026	0.25704	0.192883484
900	0.7375643	0.175	0.129073753
905	0.7308378	0.11009	0.080457933
910	0.7296296	0.0621	0.045309998
915	0.7539063	0.043125	0.032512209
920	0.7607362	0.0276	0.020996319
925	0.7728238	0.015525	0.011998089
930	0.77951	0.0069	0.005378619
935	0.7801418	0	0
940	0.7756097	0	0
945	0.7831632	0	0
950	0.7894737	0	0
<b>SUM:</b>	<b>38.16610262</b>		
<b>Tnvg(SUM/NVG):</b>	<b>0.783722009</b>	<b>(SPECTRAL</b>	
		<b>TRANSMISSION</b>	
		<b>COEFFICIENT)</b>	

# **F-16**

**Aircraft:** F-16

**Part Name:** Canopy, 'B/D TYPE', SIERRACIN

**Manufactured:** 3/86

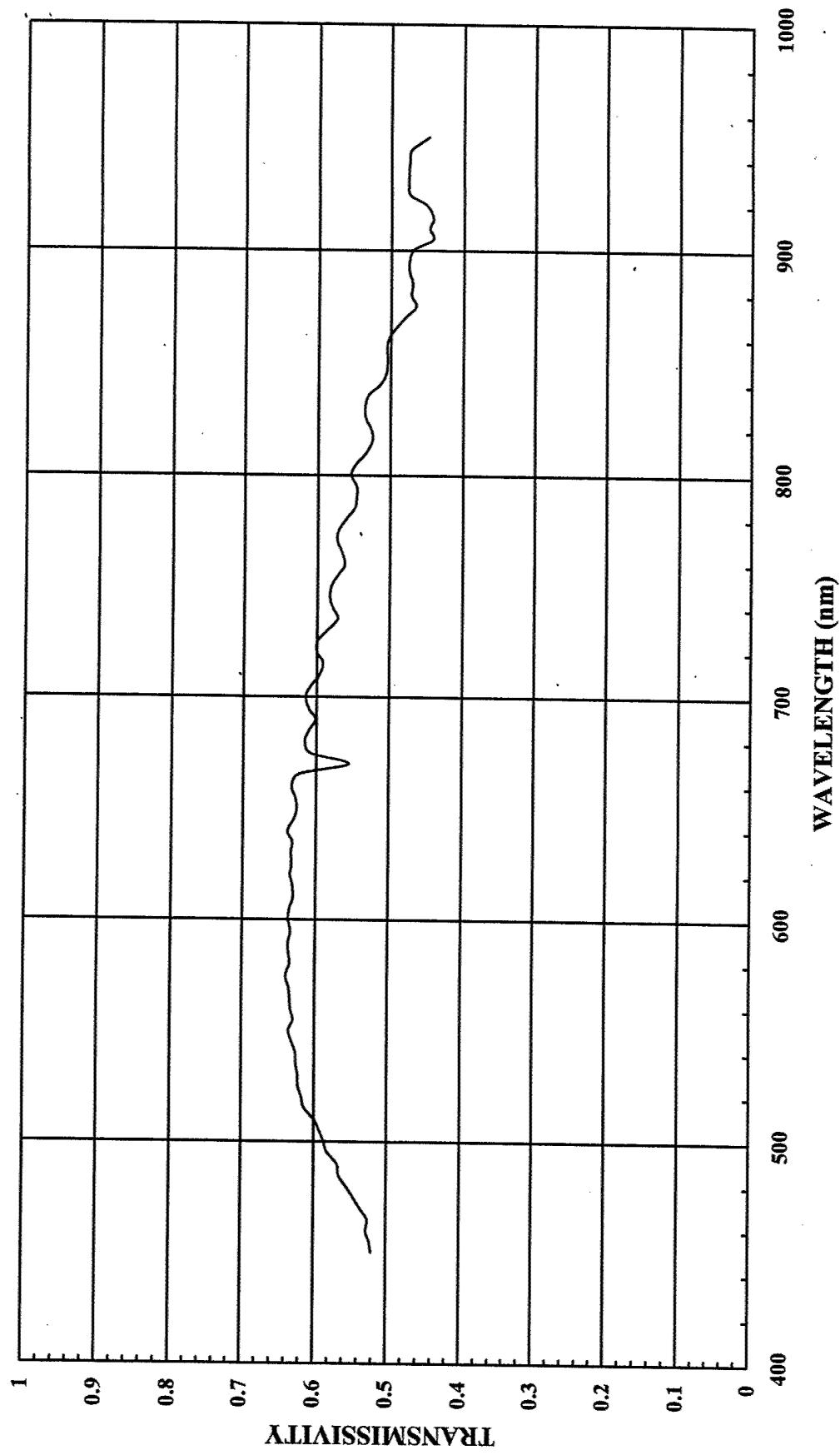
**S/N#** 077

**Material Type:** N/A

**Construction:** N/A

**Coating:** Gold Coat

F-16 CANOPY (SIERRACIN, B/D, GOLD COAT, S/N#077) @ NORMAL  
 $T_{avg} = 57\%$

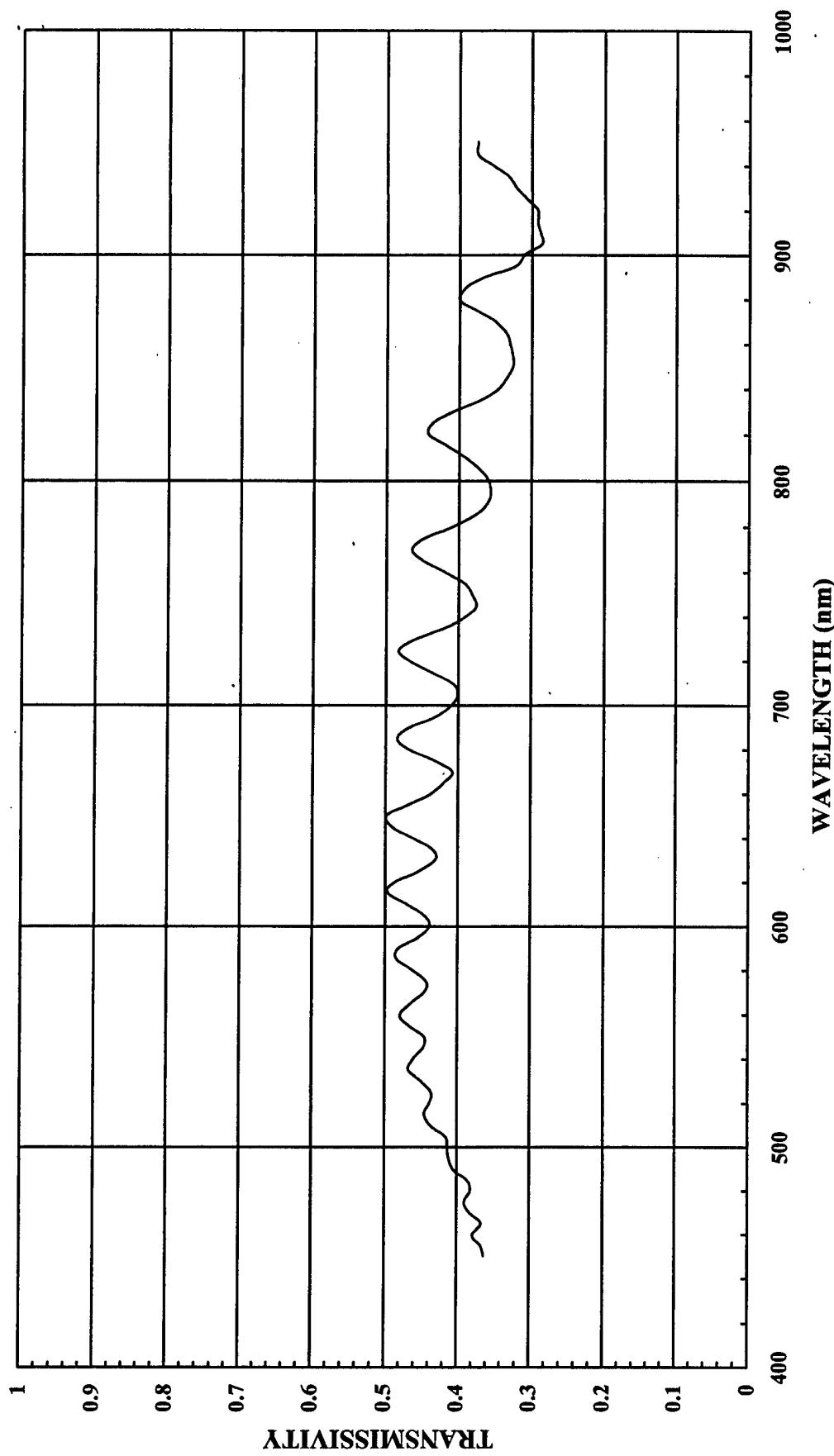


**F-16, CANOPY, SIERRACIN, B/D, GOLD COAT, S/N# 077 @ NORMAL**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
READING	"NVIS A"	RESPONSE	
450	0.5207101	0.0001	5.2071E-05
455	0.5229358	0.0001125	5.88303E-05
460	0.5277778	0.000123	6.49167E-05
465	0.5260586	0.0001375	7.23331E-05
470	0.5356577	0.00015	8.03487E-05
475	0.5449011	0.00016172	8.81214E-05
480	0.5560408	0.000175	9.73071E-05
485	0.5657709	0.00019375	0.000109618
490	0.5677853	0.0002125	0.000120654
495	0.5817728	0.00022266	0.000129538
500	0.5865384	0.0002375	0.000139303
505	0.5927273	0.00027656	0.000163925
510	0.5992736	0.0003125	0.000187273
515	0.613455	0.00034279	0.000210286
520	0.6170886	0.000375	0.000231408
525	0.6218402	0.00041875	0.000260396
530	0.6224697	0.0004625	0.000287892
535	0.6251277	0.00050703	0.000316958
540	0.6253746	0.00055	0.000343956
545	0.6317757	0.00058359	0.000368698
550	0.6357079	0.000625	0.000397317
555	0.6294996	0.0007	0.00044065
560	0.6333046	0.000775	0.000490811
565	0.6342477	0.00085	0.000539111
570	0.6359968	0.000925	0.000588297
575	0.6401575	0.0014525	0.000929829
580	0.6346004	0.00198	0.001256509
585	0.6362935	0.0047175	0.003001715
590	0.6371814	0.0078	0.004970015
595	0.6337126	0.0114	0.007224324
600	0.6370861	0.015	0.009556292
605	0.6358418	0.026263	0.016699113
610	0.6311423	0.052	0.0328194
615	0.6318243	0.088388	0.055845686
620	0.6348006	0.175	0.111090105
625	0.6332873	0.43288	0.274137406
630	0.6338983	0.6138	0.389086777
635	0.6324111	0.67756	0.428496465
640	0.6389245	0.7448	0.475870968
645	0.6300434	0.82458	0.519521187
650	0.626087	0.8897	0.557029604
655	0.6283619	0.89654	0.563351578
660	0.6335078	0.9034	0.572310947
665	0.623741	0.91051	0.567922418
670	0.5550458	0.9172	0.509088008
675	0.6081461	0.92241	0.560960044
680	0.615894	0.9276	0.571303274
685	0.6100479	0.93254	0.568894069
690	0.6012146	0.9379	0.563879173
695	0.6106195	0.9448	0.576913304
700	0.6150855	0.9517	0.58537687
705	0.6080114	0.9586	0.582839728
710	0.5965379	0.9655	0.575957342
715	0.5919396	0.97304	0.575980908

720	0.6001221	0.9793	0.587699573
725	0.5997589	0.9802	0.587883674
730	0.586917	0.9828	0.576822028
735	0.5719512	0.98838	0.565305127
740	0.5784439	0.9931	0.574452637
745	0.5829653	0.99719	0.581327168
750	0.580842	1	0.580842
755	0.5717703	1	0.5717703
760	0.562427	1	0.562427
765	0.5666667	1	0.5666667
770	0.5728155	1	0.5728155
775	0.572174	0.99814	0.571109756
780	0.5605327	0.9966	0.558626889
785	0.5493671	0.99543	0.546856492
790	0.546729	0.9945	0.543721991
795	0.5464711	0.9938	0.543082979
800	0.5542522	0.9931	0.55042786
805	0.5474944	0.9862	0.539938977
810	0.5338855	0.9793	0.52283407
815	0.5248227	0.97283	0.510563267
820	0.5268645	0.9655	0.508687675
825	0.5340356	0.95515	0.510084103
830	0.5354785	0.9448	0.505920087
835	0.5307167	0.93402	0.495700012
840	0.5146147	0.9241	0.475555444
845	0.5064456	0.9172	0.464511904
850	0.5043478	0.9103	0.459107802
855	0.5050201	0.86334	0.436004053
860	0.5036881	0.8	0.40295048
865	0.4944568	0.72848	0.36020189
870	0.478972	0.6552	0.313822454
875	0.4658536	0.58016	0.270269625
880	0.4723294	0.5034	0.23777062
885	0.4709141	0.42523	0.200246803
890	0.475	0.3448	0.16378
895	0.4758943	0.25704	0.122323871
900	0.469218	0.175	0.08211315
905	0.443299	0.11009	0.048802787
910	0.4480287	0.0621	0.027822582
915	0.443203	0.043125	0.019113129
920	0.4522417	0.0276	0.012481871
925	0.4752066	0.015525	0.007377582
930	0.4763949	0.0069	0.003287125
935	0.476082	0	0
940	0.4749403	0	0
945	0.4723618	0	0
950	0.4485488	0	0
<b>SUM:</b>		27.61126211	
<b>Tnvg(SUM/NVG):</b>		0.566983588	(SPECTRAL TRANSMISSION COEFFICIENT)

F-16 CANOPY (SIERRACIN, B/D, GOLD COAT, S/N# 077) @ DESIGN EYE  
 $T_{avg} = 41\%$



**F-16, CANOPY, SIERRACIN, B/D, GOLD COAT, S/N# 077 @ DESIGN EYE**

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC READING	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
450	0.3629192	0.0001	3.62919E-05
455	0.3669725	0.0001125	4.12844E-05
460	0.3784722	0.000123	4.65521E-05
465	0.3664495	0.0001375	5.03868E-05
470	0.3819335	0.00015	5.729E-05
475	0.3896499	0.00016172	6.30142E-05
480	0.3813683	0.000175	6.67395E-05
485	0.3861386	0.00019375	7.48144E-05
490	0.4053691	0.0002125	8.61409E-05
495	0.411985	0.0002266	9.17326E-05
500	0.4134615	0.0002375	9.81971E-05
505	0.4157576	0.00027656	0.000114982
510	0.4358354	0.0003125	0.000136199
515	0.4458381	0.00034279	0.000152829
520	0.4388185	0.000375	0.000164557
525	0.4357938	0.00041875	0.000182489
530	0.451417	0.0004625	0.00020878
535	0.4678243	0.00050703	0.000237201
540	0.4615384	0.00055	0.000253846
545	0.446729	0.00058359	0.000260707
550	0.4463481	0.000625	0.000278968
555	0.4661984	0.0007	0.000326339
560	0.4797239	0.000775	0.000371786
565	0.4638404	0.00085	0.000394264
570	0.4463277	0.000925	0.000412853
575	0.4433071	0.0014525	0.000643904
580	0.4639255	0.00198	0.000918572
585	0.4841699	0.0047175	0.002284072
590	0.4827586	0.0078	0.003765517
595	0.4566145	0.0114	0.005205405
600	0.4390728	0.015	0.006586092
605	0.4464285	0.026263	0.011724552
610	0.4690492	0.052	0.024390558
615	0.4966711	0.088388	0.043899765
620	0.4869326	0.175	0.085213205
625	0.4551105	0.43288	0.197008233
630	0.4311864	0.6138	0.264662212
635	0.4361001	0.67756	0.295483984
640	0.4609475	0.7448	0.343313698
645	0.4887781	0.82458	0.403036646
650	0.4987578	0.8897	0.443744815
655	0.4694377	0.89654	0.420869676
660	0.4391361	0.9034	0.396715553
665	0.4194245	0.91051	0.381890201
670	0.4082569	0.9172	0.374453229
675	0.4311798	0.92241	0.397724559
680	0.4701987	0.9276	0.436156314
685	0.4844497	0.93254	0.451768723
690	0.4686235	0.9379	0.439521981
695	0.4327434	0.9448	0.408855964
700	0.4090202	0.9517	0.389264524
705	0.4012875	0.9586	0.384674198
710	0.4074567	0.9655	0.393399444
715	0.4401763	0.97304	0.428309147
720	0.4676435	0.9793	0.45796328
725	0.482821	0.9802	0.473261144
730	0.4621442	0.9828	0.45419532
735	0.4182927	0.98838	0.413432139

740	0.3915817	0.9931	0.388879786
745	0.3760253	0.99719	0.374968669
750	0.3819402	1	0.3819402
755	0.3923445	1	0.3923445
760	0.4177363	1	0.4177363
765	0.4511494	1	0.4511494
770	0.4654483	1	0.4654483
775	0.4492753	0.99814	0.448439648
780	0.41247	0.9966	0.411067602
785	0.3772152	0.99543	0.375491327
790	0.3618158	0.9945	0.359825813
795	0.3563941	0.9938	0.354184457
800	0.3599707	0.9931	0.357486902
805	0.3717278	0.9862	0.366597956
810	0.3900602	0.9793	0.381985954
815	0.4184397	0.97283	0.407070693
820	0.4426624	0.9655	0.427390547
825	0.4376013	0.95515	0.417974882
830	0.4117162	0.9448	0.388989466
835	0.3694539	0.93402	0.345077332
840	0.3463242	0.9241	0.320038193
845	0.3351749	0.9172	0.307422418
850	0.3256039	0.9103	0.29639723
855	0.3263052	0.86334	0.281712331
860	0.3298209	0.8	0.26385672
865	0.3348115	0.72848	0.243903482
870	0.3504673	0.6552	0.229626175
875	0.3756098	0.58016	0.217913782
880	0.4002574	0.5034	0.201489575
885	0.3919667	0.42523	0.166676
890	0.3661765	0.3448	0.126257657
895	0.3234837	0.25704	0.08314825
900	0.3094842	0.175	0.054159735
905	0.2869416	0.11009	0.031589401
910	0.2885305	0.0621	0.017917744
915	0.292365	0.043125	0.012608241
920	0.2923976	0.0276	0.008070174
925	0.3057851	0.015525	0.004747314
930	0.3197425	0.0069	0.002206223
935	0.332574	0	0
940	0.353222	0	0
945	0.3743719	0	0
950	0.3746702	0	0
<b>SUM:</b>		20.02233525	
<b>T<sub>nv</sub>g(SUM/NVG):</b>		0.411148735	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **F-16**

**Aircraft:** F-16

**Part Name:** Canopy, Left Side, A/C, TEXSTARS

**Manufactured:** 11/92

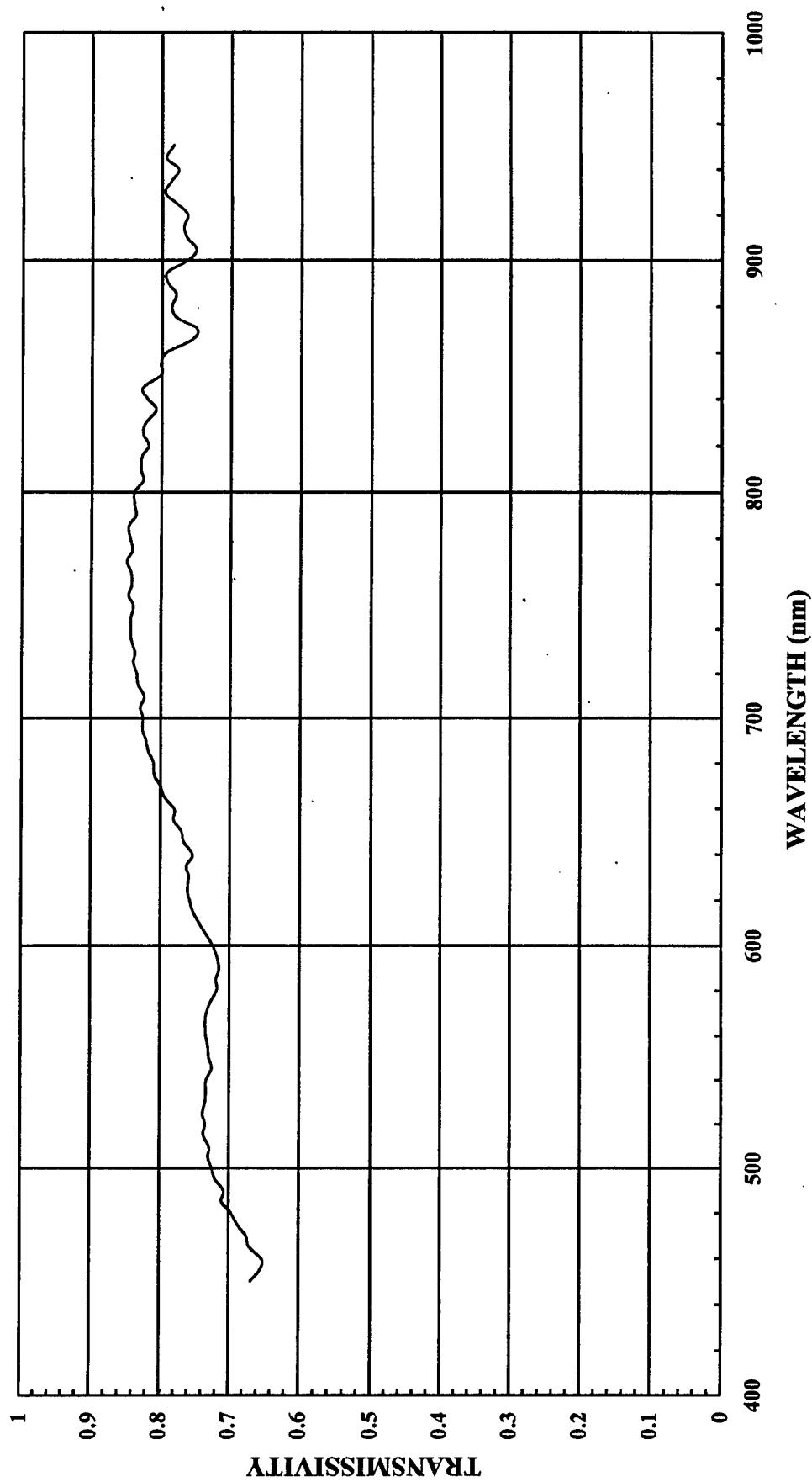
**S/N#** 010

**Material Type:** 2-3 Ply, Polycarbonate

**Construction:** N/A

**Coating:** Gold Coat

F-16 CANOPY (TEXSTARS, A/C, GOLD COAT, LEFT SIDE, 2-3 PLY  
POLYCARBONATE, S/N# 010) @ NORMAL  
 $T_{avg} = 82\%$



<b>F-16, A/C, LEFT SIDE, CANOPY, TEXSTARS, GOLD COAT,</b>			
<b>2-3 PLY POLYCARBONATE, S/N# 010 @ NORMAL</b>			
<b>WAVELENGTH(nm)</b>	<b>SPECTRA- RADIOMETRIC READING</b>	<b>RELATIVE SPECTRAL SENSITIVITY "NVIS A"</b>	<b>NVG SPECTRAL RESPONSE</b>
450	0.6685606	0.0001	6.68561E-05
455	0.6553572	0.0001125	7.37277E-05
460	0.6516666	0.000123	8.0155E-05
465	0.670347	0.0001375	9.21727E-05
470	0.6743119	0.00015	0.000101147
475	0.6868537	0.00016172	0.000111078
480	0.6971831	0.000175	0.000122007
485	0.7107438	0.00019375	0.000137707
490	0.7077922	0.0002125	0.000150406
495	0.7206771	0.00022266	0.000160466
500	0.7249417	0.0002375	0.000172174
505	0.7302709	0.00027656	0.000201964
510	0.728972	0.0003125	0.000227804
515	0.7375965	0.00034279	0.000252841
520	0.7346938	0.000375	0.00027551
525	0.7385365	0.00041875	0.000309262
530	0.7347741	0.0004625	0.000339833
535	0.7339268	0.00050703	0.000372123
540	0.7335908	0.00055	0.000403475
545	0.7254546	0.00058359	0.000423368
550	0.7296588	0.000625	0.000456037
555	0.730934	0.0007	0.000511654
560	0.7340604	0.000775	0.000568897
565	0.7350081	0.00085	0.000624757
570	0.7334905	0.000925	0.000678479
575	0.7277608	0.0014525	0.001057073
580	0.7182779	0.00198	0.00142219
585	0.7194299	0.0047175	0.003393911
590	0.7154353	0.0078	0.005580395
595	0.7187929	0.0114	0.008194239
600	0.7246937	0.015	0.010870406
605	0.7340824	0.026263	0.019279206
610	0.7434292	0.052	0.038658318
615	0.7534246	0.088388	0.066593694
620	0.7579018	0.175	0.132632815
625	0.7612551	0.43288	0.329532108
630	0.7591728	0.6138	0.465980265
635	0.7625244	0.67756	0.516656032
640	0.7539431	0.7448	0.561536821
645	0.7665442	0.82458	0.632077016
650	0.7704113	0.8897	0.685434934
655	0.7812689	0.89654	0.70043882
660	0.7803617	0.9034	0.70497876
665	0.7952756	0.91051	0.724106387
670	0.8	0.9172	0.73376
675	0.8092567	0.92241	0.746466473
680	0.8105263	0.9276	0.751844196
685	0.8176401	0.93254	0.762482099
690	0.8210313	0.9379	0.770045256
695	0.8259717	0.9448	0.780378062
700	0.8258514	0.9517	0.785962777
705	0.8295292	0.9586	0.795186691
710	0.8238826	0.9655	0.79545865
715	0.8329146	0.97304	0.810459222
720	0.8346553	0.9793	0.817377935
725	0.8395657	0.9802	0.822942299
730	0.83769	0.9828	0.823281732

735	0.8430411	0.98838	0.833244962
740	0.8431498	0.9931	0.837332066
745	0.8438496	0.99719	0.841478383
750	0.8398773	1	0.8398773
755	0.8468034	1	0.8468034
760	0.8420435	1	0.8420435
765	0.8435335	1	0.8435335
770	0.8493941	1	0.8493941
775	0.8413349	0.99814	0.839770017
780	0.8443367	0.9966	0.841465955
785	0.847338	0.99543	0.843465665
790	0.8366935	0.9945	0.832091686
795	0.8389831	0.9938	0.833781405
800	0.8386381	0.9931	0.832851497
805	0.8265151	0.9862	0.815109192
810	0.8300455	0.9793	0.812863558
815	0.8285486	0.97283	0.806036935
820	0.8187703	0.9655	0.790522725
825	0.8269073	0.95515	0.789820508
830	0.8238731	0.9448	0.778395305
835	0.8080895	0.93402	0.754771755
840	0.8204668	0.9241	0.75819337
845	0.8277153	0.9172	0.759180473
850	0.8007851	0.9103	0.728954677
855	0.8018481	0.86334	0.692267539
860	0.7944026	0.8	0.63552208
865	0.7571266	0.72848	0.551551586
870	0.75	0.6552	0.4914
875	0.7790262	0.58016	0.45195984
880	0.7863696	0.5034	0.395858457
885	0.7802817	0.42523	0.331799187
890	0.7916042	0.3448	0.272945128
895	0.7929936	0.25704	0.203831075
900	0.7614213	0.175	0.133248728
905	0.7517605	0.11009	0.082761313
910	0.7647059	0.0621	0.047488236
915	0.7695237	0.043125	0.03318571
920	0.7641129	0.0276	0.021089516
925	0.7803347	0.015525	0.012114696
930	0.796499	0.0069	0.005495843
935	0.7855478	0	0
940	0.7766991	0	0
945	0.7938932	0	0
950	0.7837839	0	0
<b>SUM:</b>		39.72448355	
<b>T<sub>Nvg</sub>(SUM/NVG):</b>		0.815722589	(SPECTRAL TRANSMISSION COEFFICIENT)

# **F-16**

**Aircraft:** F-16

**Part Name:** Canopy, A/C, left side, TEXSTARS

**Manufactured:** N/A

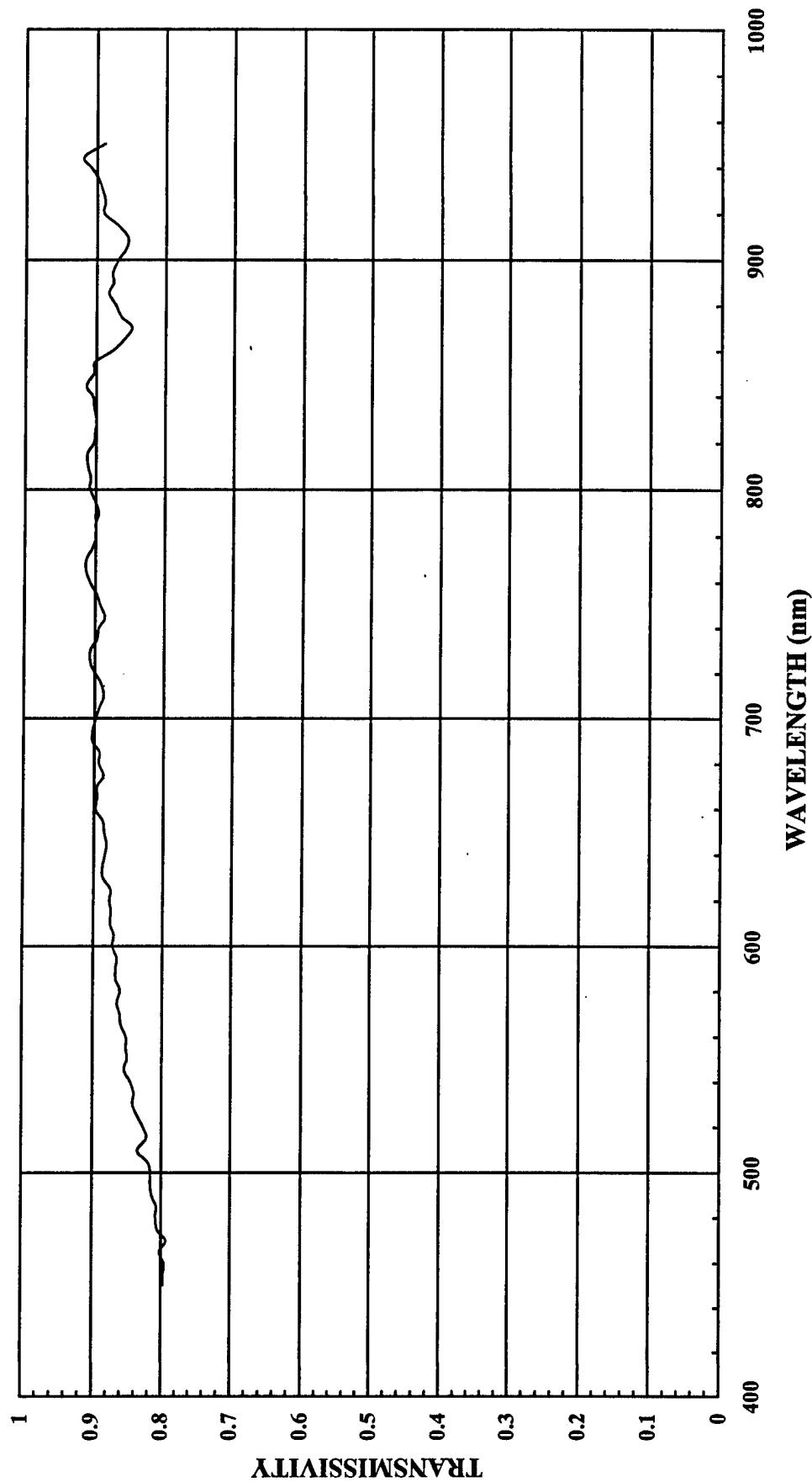
**S/N#** 130

**Material Type:** N/A

**Construction:** N/A

**Coating:** Gold Coat

F-16 CANOPY (TEXSTARS, A/C, GOLD COAT, LEFT SIDE, S/N# 130)  
@ NORMAL  
T<sub>avg</sub> = 90%



F-16, A/C, LEFT SIDE, GOLD COAT, TEXSTARS, S/N# 130, @ NORMAL

WAVELENGTH(nm)	<u>SPECTRA-</u>	<u>RELATIVE</u>	<u>NVG</u>
	<u>RADIOMETRIC</u>	<u>SPECTRAL SENSITIVITY</u>	<u>SPECTRAL</u>
READING	"NVIS A"	RESPONSE	
450	0.7969052	0.0001	7.96905E-05
455	0.7974218	0.0001125	8.971E-05
460	0.7955327	0.000123	9.78505E-05
465	0.8026101	0.0001375	0.000110359
470	0.7931035	0.00015	0.000118966
475	0.8054711	0.00016172	0.000130261
480	0.8086956	0.000175	0.000141522
485	0.8075843	0.00019375	0.000156469
490	0.8138298	0.0002125	0.000172939
495	0.8166047	0.00022266	0.000181825
500	0.8163266	0.0002375	0.000193878
505	0.8202654	0.00027656	0.000226853
510	0.8351383	0.0003125	0.000260981
515	0.8226712	0.00034279	0.000282003
520	0.8267223	0.000375	0.000310021
525	0.835	0.00041875	0.000349656
530	0.8427419	0.0004625	0.000389768
535	0.8407708	0.00050703	0.000426296
540	0.8455446	0.00055	0.00046505
545	0.8547485	0.00058359	0.000498823
550	0.8506262	0.000625	0.000531641
555	0.8525022	0.0007	0.000596752
560	0.8522337	0.000775	0.000660481
565	0.859751	0.00085	0.000730788
570	0.861267	0.000925	0.000796672
575	0.8653093	0.0014525	0.001256862
580	0.8614551	0.00198	0.001705681
585	0.8675904	0.0047175	0.004092858
590	0.867713	0.0078	0.006768161
595	0.8658192	0.0114	0.009870339
600	0.8722003	0.015	0.013083005
605	0.8704762	0.026263	0.022861316
610	0.875959	0.052	0.045549868
615	0.8749999	0.088388	0.077339491
620	0.8774949	0.175	0.153561608
625	0.8758668	0.43288	0.37914522
630	0.8873048	0.6138	0.544627686
635	0.8873426	0.67756	0.601227852
640	0.8841698	0.7448	0.658529667
645	0.8819096	0.82458	0.727205018
650	0.8854102	0.8897	0.787749455
655	0.8871067	0.89654	0.795326641
660	0.8974189	0.9034	0.810728234
665	0.8956966	0.91051	0.815540711
670	0.8962264	0.9172	0.822018854
675	0.8870056	0.92241	0.818182835
680	0.893617	0.9276	0.828919129
685	0.8924731	0.93254	0.832266865
690	0.9024641	0.9379	0.846421079
695	0.9025916	0.9448	0.852768544
700	0.8977987	0.9517	0.854435023
705	0.8931686	0.9586	0.85619142
710	0.8873048	0.9655	0.856692784
715	0.890595	0.97304	0.866584559

720	0.8996282	0.9793	0.881005896
725	0.90625	0.9802	0.88830625
730	0.9065015	0.9828	0.890909674
735	0.8972603	0.98838	0.886834135
740	0.8948052	0.9931	0.888631044
745	0.8859535	0.99719	0.883463971
750	0.8928349	1	0.8928349
755	0.8981707	1	0.8981707
760	0.9070322	1	0.9070322
765	0.9136817	1	0.9136817
770	0.9132981	1	0.9132981
775	0.9049881	0.99814	0.903304822
780	0.8996922	0.9966	0.896633247
785	0.9003257	0.99543	0.896211212
790	0.8958905	0.9945	0.890963102
795	0.9007195	0.9938	0.895135039
800	0.9087481	0.9931	0.902477738
805	0.9076213	0.9862	0.895096126
810	0.9111969	0.9793	0.892335124
815	0.9123377	0.97283	0.887549485
820	0.903437	0.9655	0.872268424
825	0.9015847	0.95515	0.861148626
830	0.8998303	0.9448	0.850159667
835	0.9029982	0.93402	0.843418379
840	0.904936	0.9241	0.836251358
845	0.913958	0.9172	0.838282278
850	0.9029999	0.9103	0.822000809
855	0.9023109	0.86334	0.779001092
860	0.8782609	0.8	0.70260872
865	0.8620297	0.72848	0.627971396
870	0.8495789	0.6552	0.556644095
875	0.8643853	0.58016	0.501481776
880	0.872	0.5034	0.4389648
885	0.8825215	0.42523	0.375274617
890	0.8761468	0.3448	0.302095417
895	0.8774194	0.25704	0.225531883
900	0.8683761	0.175	0.151965818
905	0.8581688	0.11009	0.094475803
910	0.8558052	0.0621	0.053145503
915	0.868217	0.043125	0.037441858
920	0.8900204	0.0276	0.024564563
925	0.8884211	0.015525	0.013792738
930	0.8913526	0.0069	0.006150333
935	0.8983452	0	0
940	0.9084159	0	0
945	0.9186351	0	0
950	0.8882834	0	0
<b>SUM</b>		<b>43.61716444</b>	
<b>Tnvg(SUM/NVG)</b>		<b>0.895656862</b>	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **F-16**

**Aircraft:** F-16

**Part Name:** Canopy, A/D, CFWD, TEXSTARS

**Manufactured:** N/A

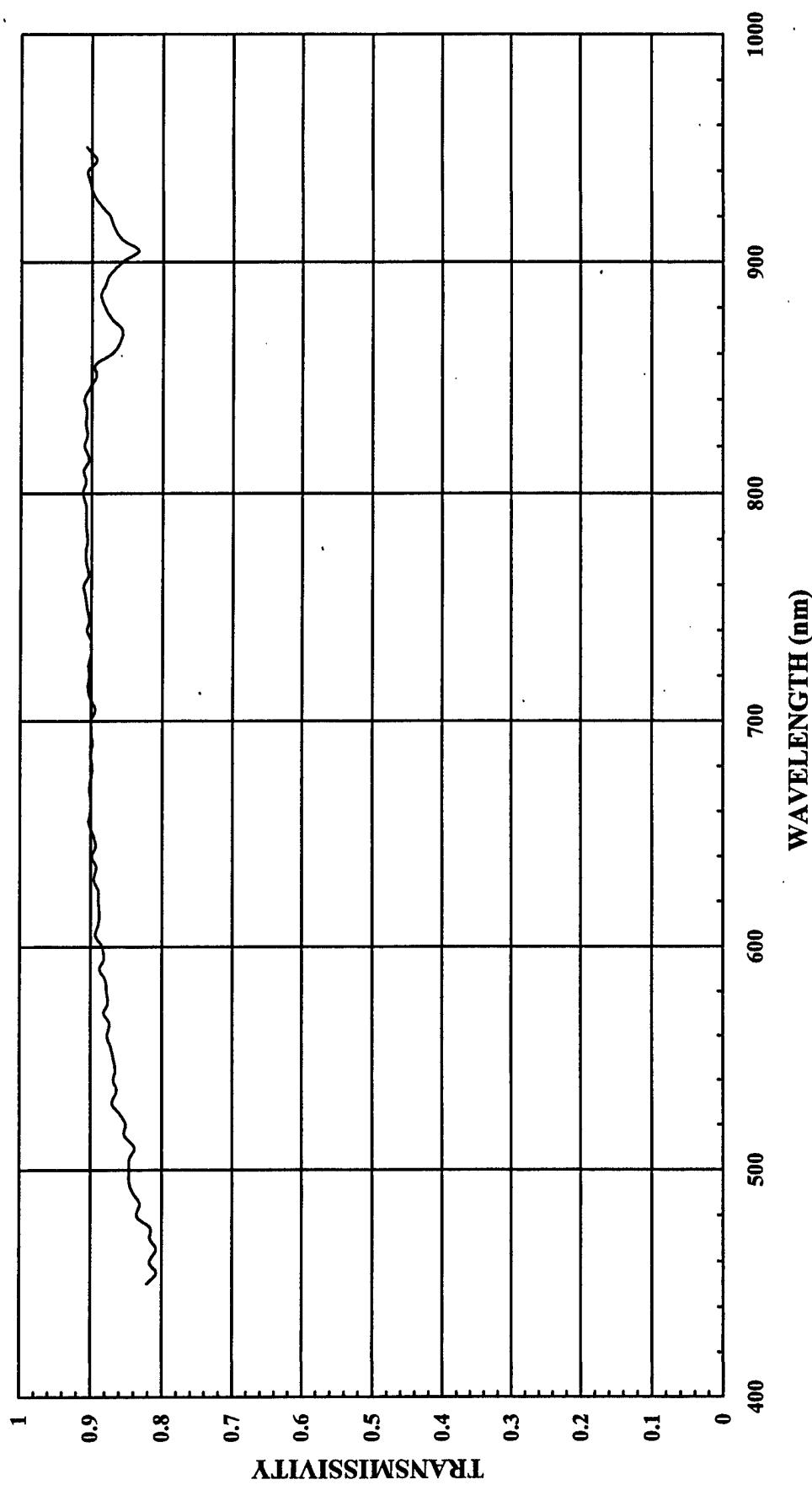
**S/N#** 3843

**Material Type:** N/A

**Construction:** N/A

**Coating:** Non-Solar

F-16 CANOPY (TEXSTARS, A/D, NON-SOLAR, CFWD, S/N# 3843) @ NORMAL  
 $T_{avg} = 90\%$

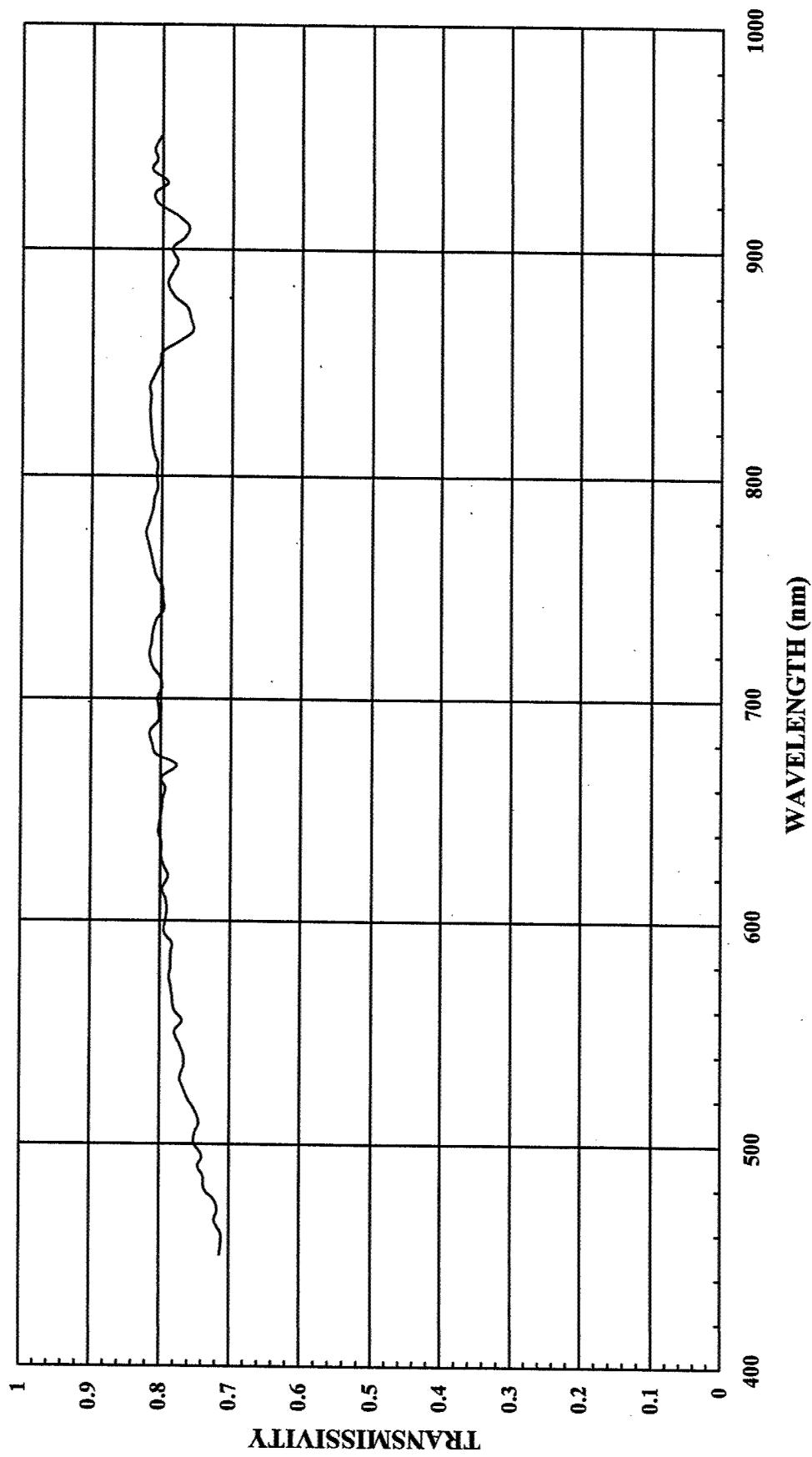


**F-16, CANOPY, A/D, CFWD, NON-SOLAR, TEXSTARS, S/N# 3843 @ NORMAL**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
	READING	"NVIS A"	RESPONSE
450	0.8212436	0.0001	8.21244E-05
455	0.8081535	0.0001125	9.09173E-05
460	0.8177778	0.000123	0.000100587
465	0.8085107	0.0001375	0.000111117
470	0.8168724	0.00015	0.000122531
475	0.8165681	0.00016172	0.000132055
480	0.8349329	0.000175	0.000146113
485	0.8311688	0.00019375	0.000161039
490	0.8406305	0.0002125	0.000178634
495	0.8460265	0.00022266	0.000188376
500	0.8461539	0.0002375	0.000200962
505	0.8455284	0.00027656	0.000233839
510	0.8384	0.0003125	0.000262
515	0.8531157	0.00034279	0.00029244
520	0.8510345	0.000375	0.000319138
525	0.8592494	0.00041875	0.000359811
530	0.8702186	0.0004625	0.000402476
535	0.8637602	0.00050703	0.000437952
540	0.8682477	0.00055	0.000477536
545	0.8656716	0.00058359	0.000505197
550	0.868421	0.000625	0.000542763
555	0.8719154	0.0007	0.000610341
560	0.8770115	0.000775	0.000679684
565	0.8733333	0.00085	0.000742333
570	0.8815931	0.000925	0.000815474
575	0.8757894	0.0014525	0.001272084
580	0.8777429	0.00198	0.001737931
585	0.8796681	0.0047175	0.004149834
590	0.8875502	0.0078	0.006922892
595	0.881579	0.0114	0.01050001
600	0.8846831	0.015	0.013270247
605	0.8931035	0.026263	0.023455577
610	0.8895652	0.052	0.04625739
615	0.8880867	0.088388	0.078496207
620	0.8893023	0.175	0.155627903
625	0.8894096	0.43288	0.385007628
630	0.8960442	0.6138	0.54999193
635	0.8924162	0.67756	0.60466552
640	0.899051	0.7448	0.669613185
645	0.8931298	0.82458	0.73645697
650	0.8975444	0.8897	0.798545253
655	0.9029289	0.89654	0.809511876
660	0.9007156	0.9034	0.813706473
665	0.9001799	0.91051	0.819622801
670	0.902439	0.9172	0.827717051
675	0.9001814	0.92241	0.830336325
680	0.8981636	0.9276	0.833136555

685	0.9012346	0.93254	0.840437314
690	0.8982826	0.9379	0.842499251
695	0.9001175	0.9448	0.850431014
700	0.8998967	0.9517	0.856431689
705	0.8942857	0.9586	0.857262272
710	0.901168	0.9655	0.870077704
715	0.9046392	0.97304	0.880250127
720	0.9027205	0.9793	0.884034186
725	0.9038619	0.9802	0.885965434
730	0.9004976	0.9828	0.885009041
735	0.9	0.98838	0.889542
740	0.9060869	0.9931	0.8998349
745	0.9030875	0.99719	0.900549824
750	0.906404	1	0.906404
755	0.9084337	1	0.9084337
760	0.9110236	1	0.9110236
765	0.904321	1	0.904321
770	0.9075501	1	0.9075501
775	0.9080911	0.99814	0.906402051
780	0.9056911	0.9966	0.90261175
785	0.9075993	0.99543	0.903451571
790	0.9076087	0.9945	0.902616852
795	0.9079697	0.9938	0.902340288
800	0.9126984	0.9931	0.906400781
805	0.9080808	0.9862	0.895549285
810	0.9112903	0.9793	0.892426591
815	0.9037657	0.97283	0.879210386
820	0.9102564	0.9655	0.878852554
825	0.9060475	0.95515	0.86541127
830	0.9083885	0.9448	0.858245455
835	0.9073226	0.93402	0.847457455
840	0.9107143	0.9241	0.841591085
845	0.9034653	0.9172	0.828658373
850	0.8935065	0.9103	0.813358967
855	0.8955225	0.86334	0.773140395
860	0.8725212	0.8	0.69801696
865	0.8614009	0.72848	0.627513328
870	0.8573667	0.6552	0.561746662
875	0.8721311	0.58016	0.505975579
880	0.8810345	0.5034	0.443512767
885	0.8876405	0.42523	0.37745137
890	0.8809524	0.3448	0.303752388
895	0.874477	0.25704	0.224775568
900	0.8558758	0.175	0.149778265
905	0.8348624	0.11009	0.091910002
910	0.8578314	0.0621	0.05327133
915	0.8696742	0.043125	0.0375047
920	0.875	0.0276	0.02415
925	0.8876712	0.015525	0.013781095
930	0.8977274	0.0069	0.006194319
935	0.9027356	0	0
940	0.9056603	0	0
945	0.8933334	0	0
950	0.9071429	0	0
<b>SUM</b>		<b>43.82486372</b>	
<b>T<sub>nv</sub>g(SUM/NVG)</b>		<b>0.899921864</b>	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

F-16 CANOPY (TEXSTARS, A/D, NON-SOLAR, CFWD, S/N# 3843)  
@ DESIGN EYE  
 $T_{avg} = 80\%$



F-16, CANOPY, A/D, CFWD, NON-SOLAR, TEXSTARS, S/N# 3843 @ DESIGN EYE			
WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
	READING	"NVIS A"	RESPONSE
450	0.7135416	0.0001	7.13542E-05
455	0.7115384	0.0001125	8.00481E-05
460	0.7117117	0.000123	8.75405E-05
465	0.7210301	0.0001375	9.91416E-05
470	0.7166666	0.00015	0.0001075
475	0.7211155	0.00016172	0.000116619
480	0.7354086	0.000175	0.000128697
485	0.7368422	0.00019375	0.000142763
490	0.7446808	0.0002125	0.000158245
495	0.7392026	0.0002266	0.000164591
500	0.7504052	0.0002375	0.000178221
505	0.7491803	0.00027656	0.000207193
510	0.7435484	0.0003125	0.000232359
515	0.75	0.00034279	0.000257093
520	0.7597765	0.000375	0.000284916
525	0.7663044	0.00041875	0.00032089
530	0.7713498	0.0004625	0.000356749
535	0.7658402	0.00050703	0.000388304
540	0.7661823	0.00055	0.0004214
545	0.7718631	0.00058359	0.000450452
550	0.7791262	0.000625	0.000486954
555	0.768595	0.0007	0.000538017
560	0.7795824	0.000775	0.000604176
565	0.7826577	0.00085	0.000665259
570	0.7843137	0.000925	0.00072549
575	0.787234	0.0014525	0.001143457
580	0.7848101	0.00198	0.001553924
585	0.784744	0.0047175	0.00370203
590	0.7832662	0.0078	0.006109476
595	0.7942583	0.0114	0.009054545
600	0.7923352	0.015	0.011885028
605	0.7906169	0.026263	0.020763972
610	0.7922535	0.052	0.041197182
615	0.7972478	0.088388	0.070467139
620	0.7888784	0.175	0.13805372
625	0.7954546	0.43288	0.344336387
630	0.7992566	0.6138	0.490583701
635	0.798574	0.67756	0.541081799
640	0.8031359	0.7448	0.598175618
645	0.8015463	0.82458	0.660939048
650	0.7986289	0.8897	0.710540132
655	0.7972973	0.89654	0.714808921
660	0.7935076	0.9034	0.716854766
665	0.7990909	0.91051	0.727580255
670	0.7777778	0.9172	0.713377798
675	0.8065694	0.92241	0.74398768
680	0.8125	0.9276	0.753675
685	0.8160378	0.93254	0.76098789
690	0.8037634	0.9379	0.753849693
695	0.8028504	0.9448	0.758533058
700	0.8048269	0.9517	0.765953761
705	0.7988395	0.9586	0.765767545
710	0.8018182	0.9655	0.774155472
715	0.8125	0.97304	0.790595
720	0.8171141	0.9793	0.800199838
725	0.8139535	0.9802	0.797837221
730	0.8124474	0.9828	0.798473305

735	0.8072391	0.98838	0.797858982
740	0.7965066	0.9931	0.791010704
745	0.7980936	0.99719	0.795850957
750	0.7988411	1	0.7988411
755	0.8074735	1	0.8074735
760	0.8116058	1	0.8116058
765	0.8148437	1	0.8148437
770	0.8190994	1	0.8190994
775	0.8222223	0.99814	0.820692967
780	0.8174342	0.9966	0.814654924
785	0.8125545	0.99543	0.808841126
790	0.81106	0.9945	0.80659917
795	0.8059273	0.9938	0.800930551
800	0.808	0.9931	0.8024248
805	0.8058943	0.9862	0.794772959
810	0.8109756	0.9793	0.794188405
815	0.814499	0.97283	0.792369062
820	0.8159311	0.9655	0.787781477
825	0.8170866	0.95515	0.780440266
830	0.8178771	0.9448	0.772730284
835	0.8161849	0.93402	0.76233302
840	0.8182912	0.9241	0.756182898
845	0.8114856	0.9172	0.744294592
850	0.802097	0.9103	0.730148899
855	0.8	0.86334	0.690672
860	0.7761836	0.8	0.62094688
865	0.7567568	0.72848	0.551282194
870	0.7606972	0.6552	0.498408805
875	0.7656766	0.58016	0.444214936
880	0.7837371	0.5034	0.394533256
885	0.7924528	0.42523	0.336974704
890	0.786	0.3448	0.2710128
895	0.7787234	0.25704	0.200163063
900	0.7863636	0.175	0.13761363
905	0.7688679	0.11009	0.084644667
910	0.7628362	0.0621	0.047372128
915	0.7783375	0.043125	0.033565805
920	0.8069705	0.0276	0.022272386
925	0.811111	0.015525	0.012592498
930	0.7931035	0.0069	0.005472414
935	0.8148147	0	0
940	0.8076923	0	0
945	0.8114479	0	0
950	0.8014184	0	0
<b>SUM</b>		39.15121004	
<b>T<sub>vg</sub>(SUM/NVG)</b>		0.803950702	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **F-16**

**Aircraft:** F-16

**Part Name:** Canopy, A/C, left side, SIERRACIN

**Manufactured:** 10/83

**S/N#** 635

**Material Type:** N/A

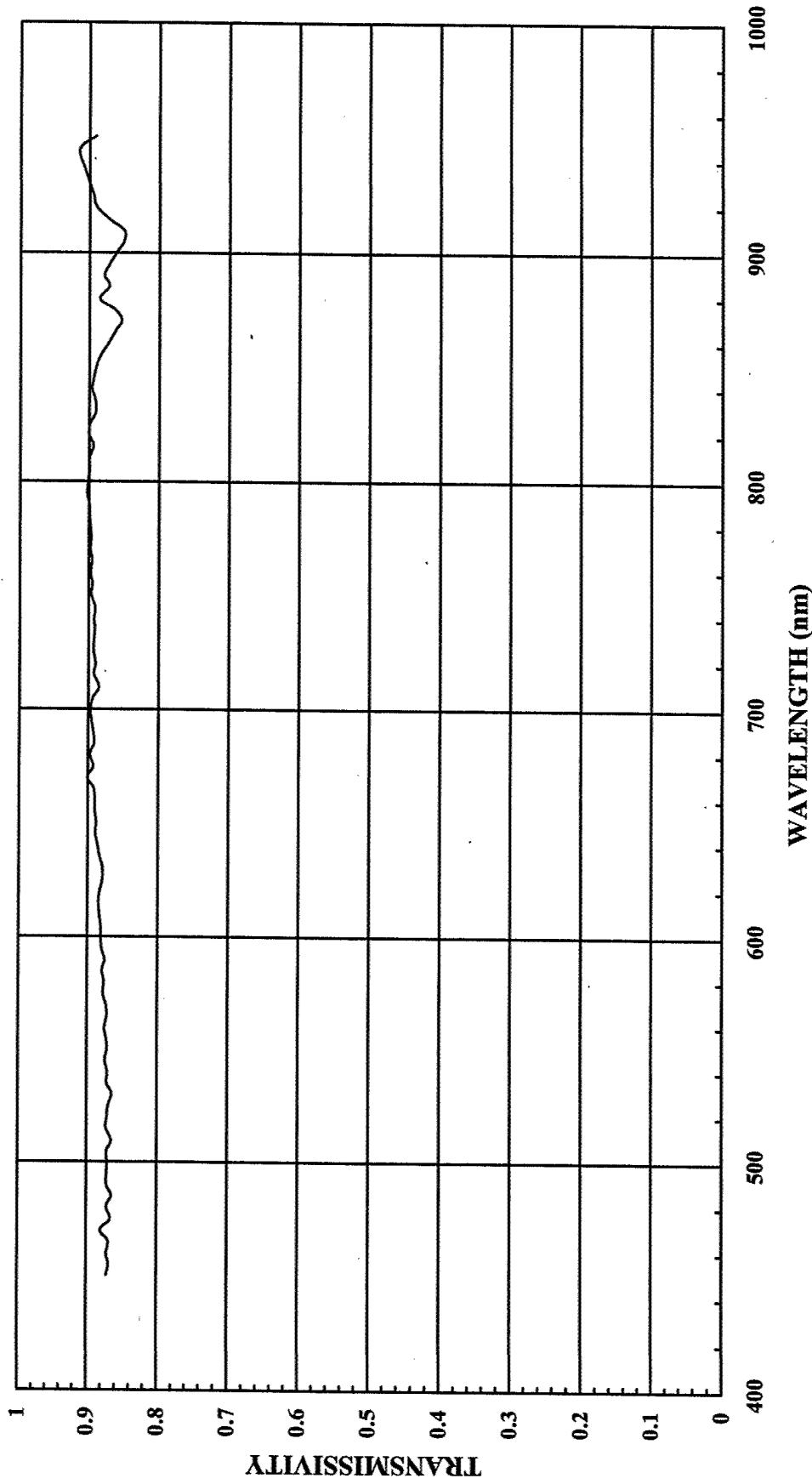
**Construction:** N/A

**Coating:** Clear Coat

F-16 CANOPY(SIERRACIN, LEFT SIDE, A/C, CLEAR COAT, S/N# 635)

@ NORMAL

T<sub>avg</sub> = 89%



**F-16, LEFT SIDE, SIERRACIN, A/C, CLEAR COAT, S/N# 635 @ NORMAL**

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
	READING	"NVIS A"	
450	0.8716475	0.0001	8.71648E-05
455	0.8683729	0.0001125	9.7692E-05
460	0.8715754	0.000123	0.000107204
465	0.868932	0.0001375	0.000119478
470	0.8803149	0.00015	0.000132047
475	0.8663663	0.00016172	0.000140109
480	0.8715729	0.000175	0.000152525
485	0.8647141	0.00019375	0.000167538
490	0.8716578	0.0002125	0.000185227
495	0.8711277	0.00022266	0.000193965
500	0.8709677	0.0002375	0.000206855
505	0.8715487	0.00027656	0.000241036
510	0.864994	0.0003125	0.000270311
515	0.8728717	0.00034279	0.000299212
520	0.8713389	0.000375	0.000326752
525	0.8697813	0.00041875	0.000364221
530	0.8648649	0.0004625	0.0004
535	0.8719512	0.00050703	0.000442105
540	0.8706811	0.00055	0.000478875
545	0.8741845	0.00058359	0.000510165
550	0.8711986	0.000625	0.000544499
555	0.8729185	0.0007	0.000611043
560	0.8751076	0.000775	0.000678208
565	0.8717735	0.00085	0.000741007
570	0.8729904	0.000925	0.000807516
575	0.8774548	0.0014525	0.001274503
580	0.876161	0.00198	0.001734799
585	0.8792307	0.0047175	0.004147771
590	0.8754689	0.0078	0.006828657
595	0.8795438	0.0114	0.010026799
600	0.8806068	0.015	0.013209102
605	0.8810433	0.026263	0.02313884
610	0.8829923	0.052	0.0459156
615	0.8841545	0.088388	0.078148648
620	0.882716	0.175	0.1544753
625	0.8793343	0.43288	0.380646232
630	0.8789116	0.6138	0.53947594
635	0.8829787	0.67756	0.598271048
640	0.8856589	0.7448	0.659638749
645	0.8891672	0.82458	0.73318949
650	0.888055	0.8897	0.790102534
655	0.8899139	0.89654	0.797843408
660	0.890139	0.9034	0.804151573
665	0.8919708	0.91051	0.812148333
670	0.9009434	0.9172	0.826345286
675	0.892598	0.92241	0.823341321
680	0.8972602	0.9276	0.832298562
685	0.8913308	0.93254	0.831201624
690	0.8924508	0.9379	0.837029605
695	0.8954545	0.9448	0.846025412
700	0.8966613	0.9517	0.853352559
705	0.8936951	0.9586	0.856696123
710	0.8849558	0.9655	0.854424825
715	0.8923969	0.97304	0.86833788
720	0.8899254	0.9793	0.871503944
725	0.8924401	0.9802	0.874769786
730	0.8925263	0.9828	0.877174848
735	0.8912368	0.98838	0.880880628

740	0.8922078	0.9931	0.886051566
745	0.8908269	0.99719	0.888323676
750	0.8965088	1	0.8965088
755	0.8943489	1	0.8943489
760	0.8970677	1	0.8970677
765	0.8953557	1	0.8953557
770	0.898007	1	0.898007
775	0.8966132	0.99814	0.894945499
780	0.8974202	0.9966	0.894368971
785	0.8989637	0.99543	0.894855436
790	0.8996587	0.9945	0.894710577
795	0.902509	0.9938	0.896913444
800	0.9015777	0.9931	0.895356814
805	0.8991532	0.9862	0.886744886
810	0.8993809	0.9793	0.880763715
815	0.893755	0.97283	0.869471677
820	0.9003295	0.9655	0.869268132
825	0.8985751	0.95515	0.858274007
830	0.890678	0.9448	0.841512574
835	0.8913234	0.93402	0.832513882
840	0.8958904	0.9241	0.827892319
845	0.8937382	0.9172	0.819736677
850	0.8894422	0.9103	0.809659235
855	0.8834547	0.86334	0.762721781
860	0.8736383	0.8	0.69891064
865	0.8632677	0.72848	0.628873254
870	0.854369	0.6552	0.559782569
875	0.8636364	0.58016	0.501047294
880	0.8848729	0.5034	0.445445018
885	0.8717949	0.42523	0.370713345
890	0.8790199	0.3448	0.303086062
895	0.8721683	0.25704	0.22418214
900	0.8610635	0.175	0.150686113
905	0.8515206	0.11009	0.093743903
910	0.8510242	0.0621	0.052848603
915	0.8713451	0.043125	0.037576757
920	0.8902439	0.0276	0.024570732
925	0.8942918	0.015525	0.01388388
930	0.8995535	0.0069	0.006206919
935	0.9056605	0	0
945	0.9145078	0	0
950	0.890411	0	0
		0	0
<b>SUM:</b>		43.39298468	
<b>T<sub>Nvg</sub>(SUM/NVG):</b>		0.891053442	(SPECTRAL TRANSMISSION COEFFICIENT)

# **F-16**

**Aircraft:** F-16

**Part Name:** Canopy, A/D, CFWD, TEXSTARS

**Manufactured:** N/A

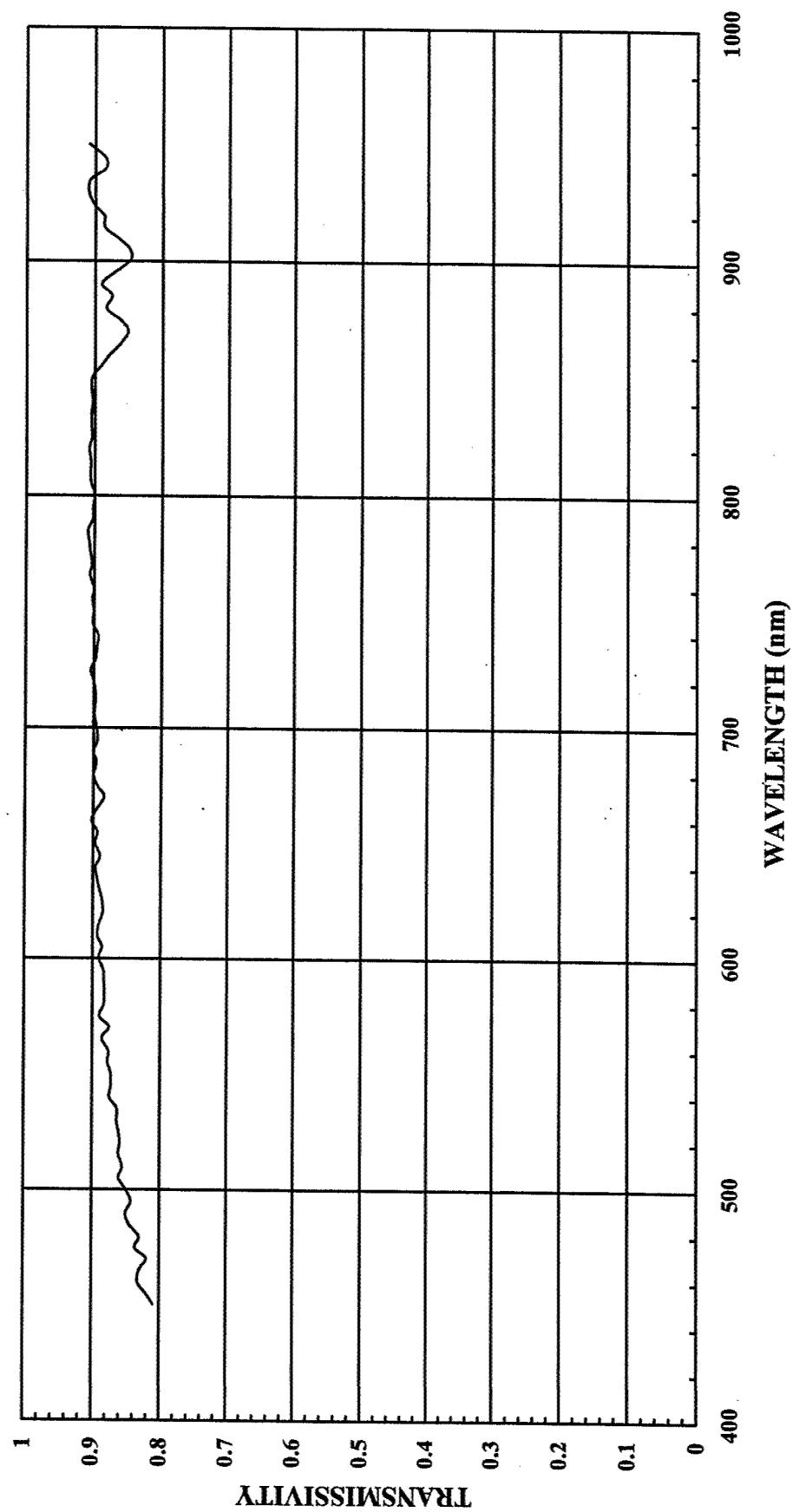
**S/N#** 3818

**Material Type:** N/A

**Construction:** N/A

**Coating:** Solar

F-16 CANOPY (TEXSTARS, A/D, CFWD, SOLAR, S/N# 3818)  
@ NORMAL  
Trvg = 90%

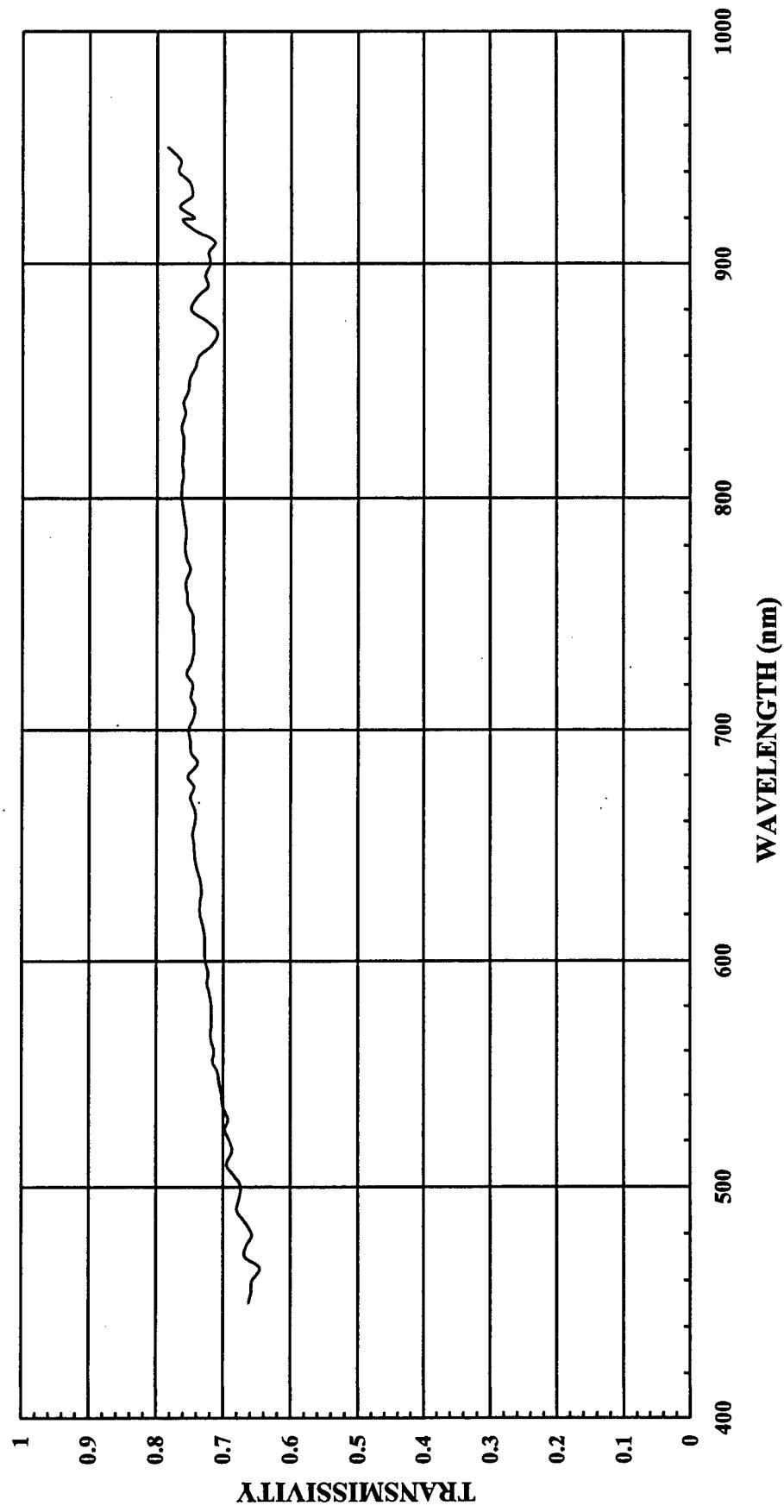


**F-16. CANOPY, TEXSTARS, A/D, CFWD, SOLAR, S/N# 3818 @ NORMAL**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
	READING	"NVIS A"	RESPONSE
450	0.8092783	0.0001	8.09278E-05
455	0.8203883	0.0001125	9.22937E-05
460	0.8325792	0.000123	0.000102407
465	0.8297414	0.0001375	0.000114089
470	0.8200837	0.00015	0.000123013
475	0.8366935	0.00016172	0.00013531
480	0.8304431	0.000175	0.000145328
485	0.8458647	0.00019375	0.000163886
490	0.8502674	0.0002125	0.000180682
495	0.8427153	0.00022266	0.000187639
500	0.8508914	0.0002375	0.000202087
505	0.8609271	0.00027656	0.000238098
510	0.8557537	0.0003125	0.000267423
515	0.8614458	0.00034279	0.000295295
520	0.8595505	0.000375	0.000322331
525	0.8610355	0.00041875	0.000360559
530	0.8640111	0.0004625	0.000399605
535	0.863824	0.00050703	0.000437985
540	0.8746666	0.00055	0.000481067
545	0.8727735	0.00058359	0.000509342
550	0.8727273	0.000625	0.000545455
555	0.8775268	0.0007	0.000614269
560	0.8766007	0.000775	0.000679366
565	0.8862613	0.00085	0.000753322
570	0.8755411	0.000925	0.000809876
575	0.8898396	0.0014525	0.001292492
580	0.8837209	0.00198	0.001749767
585	0.8823529	0.0047175	0.0041625
590	0.8833672	0.0078	0.006890264
595	0.8835878	0.0114	0.010072901
600	0.890974	0.015	0.01336461
605	0.886087	0.026263	0.023271303
610	0.8931096	0.052	0.046441699
615	0.8914233	0.088388	0.078791123
620	0.8854461	0.175	0.154953068
625	0.8863636	0.43288	0.383689075
630	0.8898148	0.6138	0.546168324
635	0.8943599	0.67756	0.605982494
640	0.8963415	0.7448	0.667595149
645	0.8898377	0.82458	0.733742371
650	0.897084	0.8897	0.798135635
655	0.8939394	0.89654	0.80145243
660	0.9024391	0.9034	0.815263483
665	0.8958334	0.91051	0.815665269
670	0.8841464	0.9172	0.810939078
675	0.8937729	0.92241	0.824425061
680	0.8998302	0.9276	0.834682494

685	0.8958991	0.93254	0.835461747
690	0.9004038	0.9379	0.844488724
695	0.8942993	0.9448	0.844933979
700	0.8958333	0.9517	0.852564552
705	0.8993224	0.9586	0.862090453
710	0.8981819	0.9655	0.867194624
715	0.8975695	0.97304	0.873371026
720	0.9002514	0.9793	0.881616196
725	0.9049208	0.9802	0.887003368
730	0.897565	0.9828	0.882126882
735	0.8957107	0.98838	0.885302542
740	0.8940455	0.9931	0.887876586
745	0.9020798	0.99719	0.899544956
750	0.9004149	1	0.9004149
755	0.9029363	1	0.9029363
760	0.9003165	1	0.9003165
765	0.9065421	1	0.9065421
770	0.9038013	1	0.9038013
775	0.9056305	0.99814	0.903946027
780	0.9078947	0.9966	0.904807858
785	0.9098862	0.99543	0.90572802
790	0.9022831	0.9945	0.897320543
795	0.9022989	0.9938	0.896704647
800	0.9003984	0.9931	0.894185651
805	0.9051988	0.9862	0.892707057
810	0.906504	0.9793	0.887739367
815	0.9057203	0.97283	0.881111879
820	0.9085038	0.9655	0.877160419
825	0.9040349	0.95515	0.863488935
830	0.9051339	0.9448	0.855170509
835	0.9053118	0.93402	0.845579327
840	0.90311	0.9241	0.834563951
845	0.904762	0.9172	0.829847706
850	0.9040736	0.9103	0.822978198
855	0.8908595	0.86334	0.769114641
860	0.8787446	0.8	0.70299568
865	0.860606	0.72848	0.626934259
870	0.851735	0.6552	0.558056772
875	0.8630363	0.58016	0.50069914
880	0.8832753	0.5034	0.444640786
885	0.8752328	0.42523	0.372175244
890	0.8902196	0.3448	0.306947718
895	0.8726514	0.25704	0.224306316
900	0.8488889	0.175	0.148555558
905	0.8491879	0.11009	0.093487096
910	0.8658536	0.0621	0.053769509
915	0.8860759	0.043125	0.038212023
919	0.8862433	0.0276	0.024460315
920	0.8882979	0.015525	0.013790825
925	0.9030471	0.0069	0.006231025
930	0.9093567	0	0
935	0.9076923	0	0
940	0.8853503	0	0
945	0.8855219	0	0
950	0.9090909		
<b>SUM</b>		43.68197598	
<b>Tnvg(SUM/NVG)</b>		0.896987735	(SPECTRAL
			TRANSMISSION
			COEFFICIENT)

F-16 CANOPY (TEXSTARS, A/D, CFWD, SOLAR, S/N# 3818)  
@ DESIGN EYE  
T<sub>avg</sub> = 75%



**F-16. CANOPY, TEXSTARS, A/D, CFWD, SOLAR, S/N# 3818 @ DESIGN EYE**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
	READING	"NVIS A"	RESPONSE
450	0.6623712	0.0001	6.62371E-05
455	0.6585957	0.0001125	7.4092E-05
460	0.6576576	0.000123	8.08919E-05
465	0.6459227	0.0001375	8.88144E-05
470	0.6680672	0.00015	0.00010021
475	0.666	0.00016172	0.000107706
480	0.6576923	0.000175	0.000115096
485	0.6685393	0.00019375	0.000129529
490	0.6797153	0.0002125	0.00014444
495	0.6766169	0.00022266	0.000150656
500	0.6742302	0.0002375	0.00016013
505	0.6842105	0.00027656	0.000189225
510	0.6948052	0.0003125	0.000217127
515	0.686747	0.00034279	0.00023541
520	0.6910112	0.000375	0.000259129
525	0.6975477	0.00041875	0.000292098
530	0.6927298	0.0004625	0.000320388
535	0.7006896	0.00050703	0.000355271
540	0.7022697	0.00055	0.000386248
545	0.7054362	0.00058359	0.000411686
550	0.7085852	0.000625	0.000442866
555	0.7159905	0.0007	0.000501193
560	0.7136205	0.000775	0.000553056
565	0.7184685	0.00085	0.000610698
570	0.7183406	0.000925	0.000664465
575	0.7179487	0.0014525	0.00104282
580	0.717759	0.00198	0.001421163
585	0.7207587	0.0047175	0.003400179
590	0.7245935	0.0078	0.005651829
595	0.7229146	0.0114	0.008241226
600	0.7272727	0.015	0.010909091
605	0.7278261	0.026263	0.019114897
610	0.7277533	0.052	0.037843172
615	0.7301006	0.088388	0.064532132
620	0.7350993	0.175	0.128642378
625	0.7352381	0.43288	0.318269869
630	0.7325256	0.6138	0.449624213
635	0.7352415	0.67756	0.498170231
640	0.7401574	0.7448	0.551269232
645	0.7426598	0.82458	0.612382418
650	0.7444062	0.8897	0.662298196
655	0.7462057	0.89654	0.669003258
660	0.7423424	0.9034	0.670632124
665	0.7424932	0.91051	0.676047484
670	0.75	0.9172	0.6879
675	0.7444444	0.92241	0.686682959
680	0.7534247	0.9276	0.698876752

685	0.7389937	0.93254	0.689141185
690	0.7489879	0.9379	0.702475751
695	0.749702	0.9448	0.70831845
700	0.7526205	0.9517	0.71626893
705	0.7456311	0.9586	0.714761972
710	0.743427	0.9655	0.717778769
715	0.7495652	0.97304	0.729356922
720	0.7466443	0.9793	0.731188763
725	0.7554076	0.9802	0.74045053
730	0.7487437	0.9828	0.735865308
735	0.7449495	0.98838	0.736293187
740	0.7445127	0.9931	0.739375562
745	0.7465398	0.99719	0.744442023
750	0.7466996	1	0.7466996
755	0.7538461	1	0.7538461
760	0.7549564	1	0.7549564
765	0.7570312	1	0.7570312
770	0.7507764	1	0.7507764
775	0.7557677	0.99814	0.754361972
780	0.7582237	0.9966	0.755645739
785	0.7565218	0.99543	0.753064495
790	0.7589368	0.9945	0.754762648
795	0.7607656	0.9938	0.756048853
800	0.763527	0.9931	0.758258664
805	0.7632653	0.9862	0.752732239
810	0.7606924	0.9793	0.744946067
815	0.7627119	0.97283	0.741989018
820	0.7607296	0.9655	0.734484429
825	0.7603486	0.95515	0.726246965
830	0.7639198	0.9448	0.721751427
835	0.7580645	0.93402	0.708047404
840	0.7607656	0.9241	0.703023491
845	0.7537313	0.9172	0.691322348
850	0.7513089	0.9103	0.683916492
855	0.7428181	0.86334	0.641304578
860	0.7378224	0.8	0.59025792
865	0.718797	0.72848	0.523629239
870	0.7102362	0.6552	0.465346758
875	0.7260727	0.58016	0.421238338
880	0.7495622	0.5034	0.377329611
885	0.7410882	0.42523	0.315132935
890	0.7244095	0.3448	0.249776396
895	0.7280335	0.25704	0.187133731
900	0.7207208	0.175	0.12612614
905	0.7232558	0.11009	0.079623231
910	0.7142857	0.0621	0.044357142
915	0.7435898	0.043125	0.03206731
919	0.7619047	0.0276	0.02102857
920	0.7453581	0.015525	0.011571685
925	0.7660167	0.0069	0.005285515
930	0.7485549	0	0
935	0.7515338	0	0
940	0.7677419	0	0
945	0.7651007	0	0
950	0.7838828		
<b>SUM</b>		36.46945068	
<b>T<sub>Nvg</sub>(SUM/NVG)</b>		0.748882102	<b>(SPECTRAL</b>
			<b>TRANSMISSION</b>
			<b>COEFFICIENT)</b>

# **F-16**

**Aircraft:** F-16

**Part Name:** Canopy, A/C, Left Side, SIERRACIN

**Manufactured:** 8/86

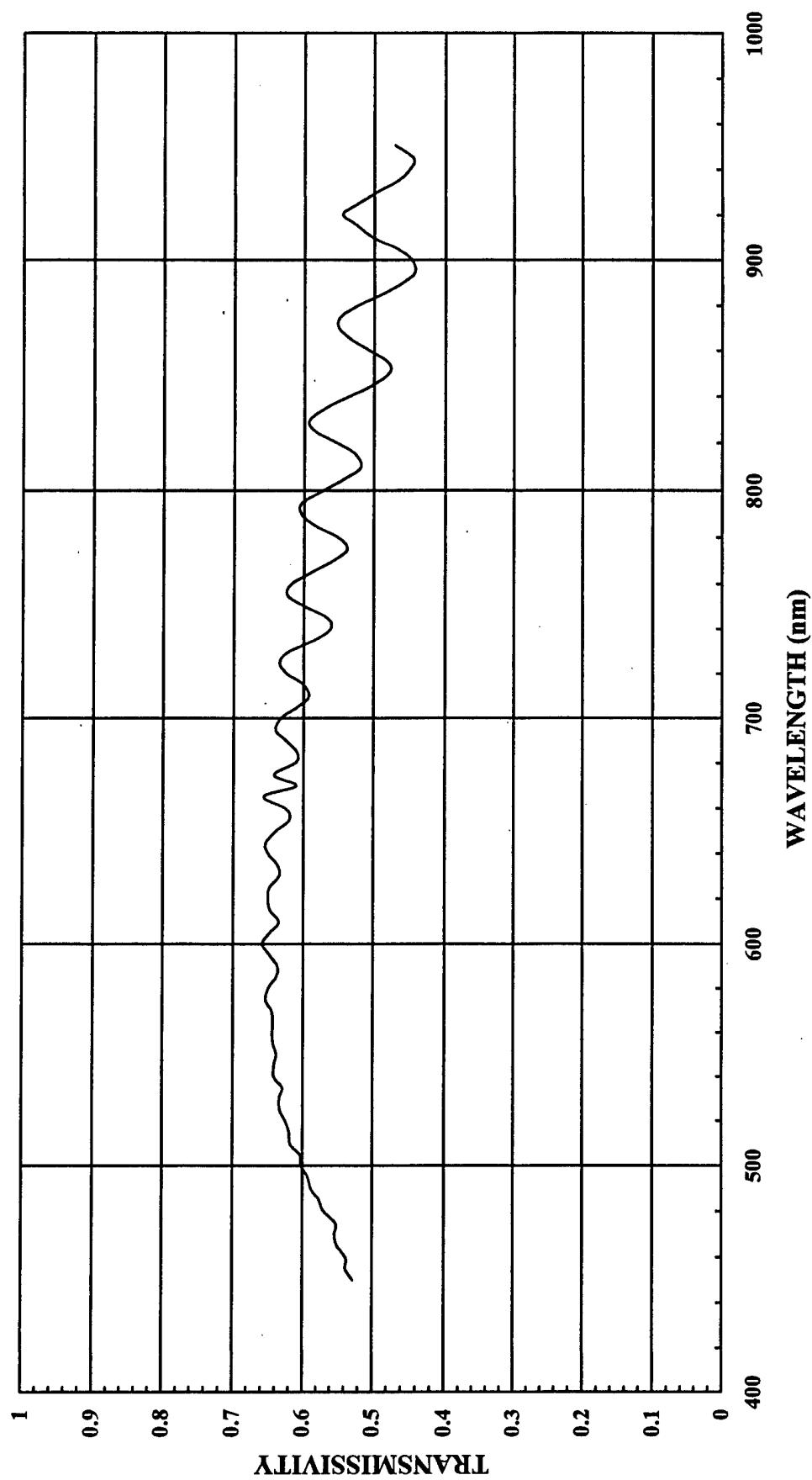
**S/N#** 661

**Material Type:** N/A

**Construction:** N/A

**Coating:** Gold Coat

F-16 CANOPY (SIERRACIN, A/C, GOLD COAT, LEFT SIDE, S/N# 661)  
@ NORMAL  
 $T_{avg} = 58\%$



**F-16, CANOPY, A/C, LEFT SIDE, GOLD COAT, SIERRACIN, S/N# 661 @ NORMAL**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG	
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL	
	READING	"NVIS A"	RESPONSE	
450	0.527451	0.0001	5.27451E-05	
455	0.5376146	0.0001125	6.04816E-05	
460	0.5367522	0.000123	6.60205E-05	
465	0.55	0.0001375	0.000075625	
470	0.5534591	0.00015	8.30189E-05	
475	0.5512048	0.00016172	8.91408E-05	
480	0.5695652	0.000175	9.96739E-05	
485	0.5758427	0.00019375	0.00011157	
490	0.587766	0.0002125	0.0001249	
495	0.5930949	0.00022266	0.000132059	
500	0.6021634	0.0002375	0.000143014	
505	0.6036144	0.00027656	0.000166936	
510	0.6177884	0.0003125	0.000193059	
515	0.6196388	0.00034279	0.000212406	
520	0.625	0.000375	0.000234375	
525	0.633	0.00041875	0.000265069	
530	0.6339737	0.0004625	0.000293213	
535	0.6295547	0.00050703	0.000319203	
540	0.6416584	0.00055	0.000352912	
545	0.6414566	0.00058359	0.000374348	
550	0.638565	0.000625	0.000399103	
555	0.6430446	0.0007	0.000450131	
560	0.6438356	0.000775	0.000498973	
565	0.6435071	0.00085	0.000546981	
570	0.6452649	0.000925	0.00059687	
575	0.6538763	0.0014525	0.000949755	
580	0.6496519	0.00198	0.001286311	
585	0.6392307	0.0047175	0.003015571	
590	0.6370426	0.0078	0.004968932	
595	0.6493689	0.0114	0.007402805	
600	0.6589558	0.015	0.009884337	
605	0.6485969	0.026263	0.0170341	
610	0.6356094	0.052	0.033051689	
615	0.6485944	0.088388	0.057327962	
620	0.6506521	0.175	0.113864118	
625	0.6493416	0.43288	0.281086992	
630	0.6345108	0.6138	0.389462729	
635	0.637931	0.67756	0.432236528	
640	0.6503856	0.7448	0.484407195	
645	0.654717	0.82458	0.539866544	
650	0.63875	0.8897	0.568295875	
655	0.6206262	0.89654	0.556416213	
660	0.6243421	0.9034	0.564030653	
665	0.6569129	0.91051	0.598125765	
670	0.6103286	0.9172	0.559793392	
675	0.6424502	0.92241	0.592602489	
680	0.6104417	0.9276	0.566245721	
685	0.6101695	0.93254	0.569007466	
690	0.625	0.9379	0.5861875	
695	0.6403587	0.9448	0.6050109	
700	0.6320755	0.9517	0.601546253	
705	0.6090117	0.9586	0.583798616	
710	0.592668	0.9655	0.572220954	
715	0.6012821	0.97304	0.585071535	
720	0.6249225	0.9793	0.611986604	

725	0.6349109	0.9802	0.622339664	
730	0.6231436	0.9828	0.61242553	
735	0.5835412	0.98838	0.576760451	
740	0.5614834	0.9931	0.557609165	
745	0.564683	0.99719	0.563096241	
750	0.6004994	1	0.6004994	
755	0.6239263	1	0.6239263	
760	0.6187351	1	0.6187351	
765	0.5860246	1	0.5860246	
770	0.5569918	1	0.5569918	
775	0.5380048	0.99814	0.537004111	
780	0.5482484	0.9966	0.546384355	
785	0.5851756	0.99543	0.582501348	
790	0.6035544	0.9945	0.600234851	
795	0.6034483	0.9938	0.599706921	
800	0.5694966	0.9931	0.565567073	
805	0.5411856	0.9862	0.533717239	
810	0.5184616	0.9793	0.507729445	
815	0.5270817	0.97283	0.51276089	
820	0.5533661	0.9655	0.53427497	
825	0.5843072	0.95515	0.558101022	
830	0.592718	0.9448	0.559999966	
835	0.5664029	0.93402	0.529031637	
840	0.5351598	0.9241	0.494541171	
845	0.5033365	0.9172	0.461660238	
850	0.4784785	0.9103	0.435558979	
855	0.4807492	0.86334	0.415050014	
860	0.5054705	0.8	0.4043764	
865	0.5351788	0.72848	0.389867052	
870	0.5507247	0.6552	0.360834823	
875	0.5481012	0.58016	0.317986392	
880	0.5246338	0.5034	0.264100655	
885	0.4864092	0.42523	0.206835784	
890	0.46	0.3448	0.158608	
895	0.4433657	0.25704	0.11396272	
900	0.4482758	0.175	0.078448265	
905	0.4676259	0.11009	0.051480935	
910	0.5018726	0.0621	0.031166288	
915	0.5251938	0.043125	0.022648983	
920	0.5447155	0.0276	0.015034148	
925	0.5235043	0.015525	0.008127404	
930	0.4977778	0.0069	0.003434667	
935	0.4655582	0	0	
940	0.450495	0	0	
945	0.4450261	0	0	
950	0.4705882	0	0	
<b>SUM:</b>		28.42127233		
<b>Tnvg(SUM/NVG):</b>		0.583616746	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>	

# **F-111**

**Aircraft:** F-111

**Part Name:** Windscreen, SIERRACIN

**Manufactured:** N/A

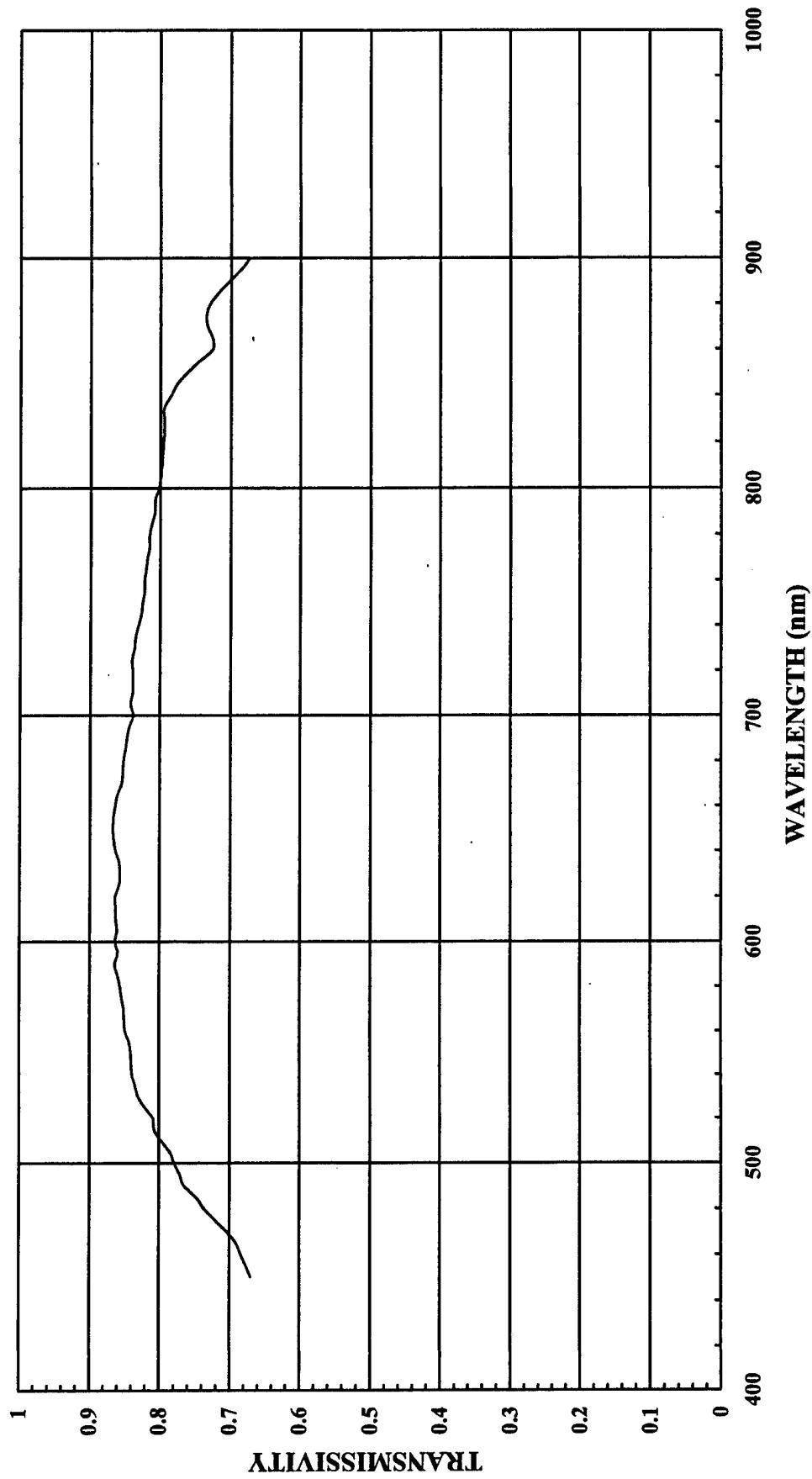
**S/N#** 606

**Material Type:** Polycarbonate

**Construction:** Layered

**Coating:** Acrylic

F-111 WINDSCREEN(ACRYLIC WITH POLYCARBONATE LAYERS, SIERRACIN,  
S/N#606) @ NORMAL  
 $T_{avg} = 81\%$

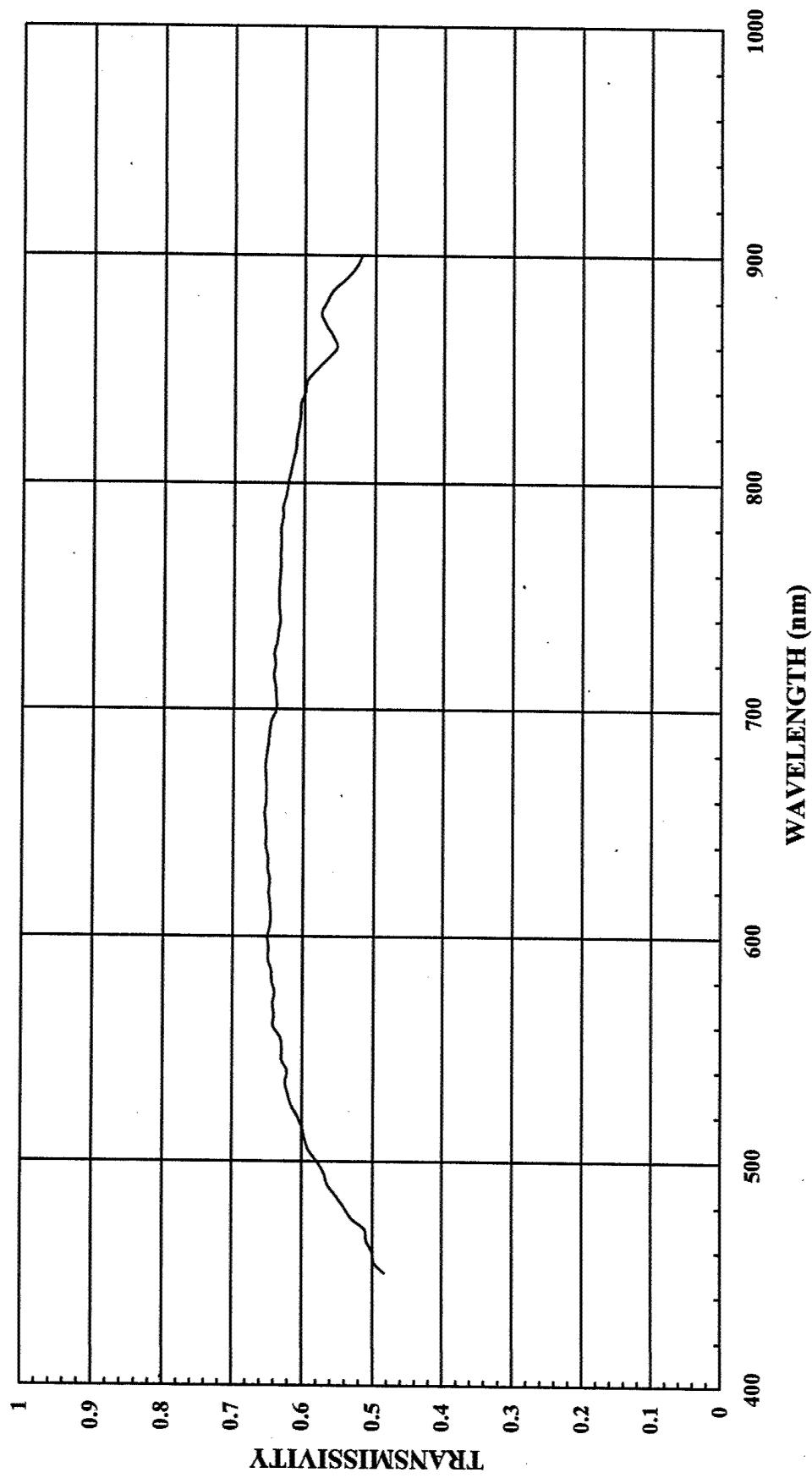


**F-111, SIERRACIN, S/N# 606, ACRYLIC, POLYCARBONATE/LAYERED @ NORMAL**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG SPECTRAL RESPONSE
	RADIOMETRIC	SPECTRAL SENSITIVITY	
	READING	"NVIS A"	
450	0.669887	0.0001	6.70E-05
455	0.675969	0.0001125	7.60E-05
460	0.683599	0.000123	8.41E-05
465	0.690231	0.0001375	9.49E-05
470	0.702864	0.00015	1.05E-04
475	0.719425	0.00016172	1.16E-04
480	0.735739	0.000175	1.29E-04
485	0.747126	0.00019375	1.45E-04
490	0.765596	0.0002125	1.63E-04
495	0.771028	0.00022266	1.72E-04
500	0.779506	0.0002375	1.85E-04
505	0.784722	0.00027656	2.17E-04
510	0.796888	0.0003125	2.49E-04
515	0.807087	0.00034279	2.77E-04
520	0.808715	0.000375	3.03E-04
525	0.820318	0.00041875	3.44E-04
530	0.829773	0.0004625	3.84E-04
535	0.834	0.00050703	4.23E-04
540	0.838583	0.00055	4.61E-04
545	0.839877	0.00058359	4.90E-04
550	0.840693	0.000625	5.25E-04
555	0.843002	0.0007	5.90E-04
560	0.848567	0.000775	6.58E-04
565	0.850028	0.00085	7.23E-04
570	0.851087	0.000925	7.87E-04
575	0.854007	0.0014525	1.24E-03
580	0.856184	0.00198	1.70E-03
585	0.859592	0.0047175	4.06E-03
590	0.863783	0.0078	6.74E-03
595	0.859633	0.0114	9.80E-03
600	0.86376	0.015	1.30E-02
605	0.860989	0.026263	2.26E-02
610	0.862847	0.052	4.49E-02
615	0.862889	0.088388	7.63E-02
620	0.8635	0.175	1.51E-01
625	0.858206	0.43288	3.72E-01
630	0.856974	0.6138	5.26E-01
635	0.857791	0.67756	5.81E-01
640	0.86306	0.7448	6.43E-01
645	0.865983	0.82458	7.14E-01
650	0.866457	0.8897	7.71E-01
655	0.866426	0.89654	7.77E-01
660	0.863565	0.9034	7.80E-01
665	0.860597	0.91051	7.84E-01
670	0.854234	0.9172	7.84E-01
675	0.853032	0.92241	7.87E-01
680	0.851714	0.9276	7.90E-01
685	0.848998	0.93254	7.92E-01
690	0.846819	0.9379	7.94E-01
695	0.843718	0.9448	7.97E-01
700	0.83807	0.9517	7.98E-01
705	0.841649	0.9586	8.07E-01
710	0.838791	0.9655	8.10E-01

715	0.838287	0.97304	8.16E-01
720	0.83923	0.9793	8.22E-01
725	0.839567	0.9802	8.23E-01
730	0.836255	0.9828	8.22E-01
735	0.834975	0.98838	8.25E-01
740	0.831105	0.9931	8.25E-01
745	0.82693	0.99719	8.25E-01
750	0.825027	1	8.25E-01
755	0.822373	1	8.22E-01
760	0.822206	1	8.22E-01
765	0.820266	1	8.20E-01
770	0.818077	1	8.18E-01
775	0.815614	0.99814	8.14E-01
780	0.8156	0.9966	8.13E-01
785	0.811623	0.99543	8.08E-01
790	0.807281	0.9945	8.03E-01
795	0.807318	0.9938	8.02E-01
800	0.802536	0.9931	7.97E-01
805	0.799924	0.9862	7.89E-01
810	0.798077	0.9793	7.82E-01
815	0.797079	0.97283	7.75E-01
820	0.796061	0.9655	7.69E-01
825	0.794762	0.95515	7.59E-01
830	0.794779	0.9448	7.51E-01
835	0.794668	0.93402	7.42E-01
840	0.785235	0.9241	7.26E-01
845	0.776807	0.9172	7.12E-01
850	0.762228	0.9103	6.94E-01
855	0.744578	0.86334	6.43E-01
860	0.726794	0.8	5.81E-01
865	0.726883	0.72848	5.30E-01
870	0.733941	0.6552	4.81E-01
875	0.73561	0.58016	4.27E-01
880	0.730365	0.5034	3.68E-01
885	0.716519	0.42523	3.05E-01
890	0.702746	0.3448	2.42E-01
895	0.686659	0.25704	1.76E-01
900	0.673977	0.175	1.18E-01
<b>SUM</b>		39.51563529	
<b>Tnvg(SUM/NVG)</b>		0.811433993	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

F-111 WINDSCREEN (ACRYLIC WITH POLYCARBONATE LAYERS, SIERRACIN,  
S/N#606) @ DESIGN EYE  
T<sub>ng</sub> = 62%



**F-111, SIERRACIN, S/N# 606, ACRYLIC, POLYCARBONATE/LAYERED @ DESIGN EYE**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG	
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL	
	READING	"NVIS A"	RESPONSE	
450	0.483092	0.0001	4.83E-05	
455	0.497674	0.0001125	5.60E-05	
460	0.500726	0.000123	6.16E-05	
465	0.508997	0.0001375	7.00E-05	
470	0.51074	0.00015	7.66E-05	
475	0.529976	0.00016172	8.57E-05	
480	0.540163	0.000175	9.45E-05	
485	0.551724	0.00019375	1.07E-04	
490	0.564176	0.0002125	1.20E-04	
495	0.569159	0.00022266	1.27E-04	
500	0.578657	0.0002375	1.37E-04	
505	0.590278	0.00027656	1.63E-04	
510	0.596233	0.0003125	1.86E-04	
515	0.6	0.00034279	2.06E-04	
520	0.606352	0.000375	2.27E-04	
525	0.615757	0.00041875	2.58E-04	
530	0.62016	0.0004625	2.87E-04	
535	0.624	0.00050703	3.16E-04	
540	0.621391	0.00055	3.42E-04	
545	0.629448	0.00058359	3.67E-04	
550	0.628843	0.000625	3.93E-04	
555	0.631187	0.0007	4.42E-04	
560	0.641428	0.000775	4.97E-04	
565	0.640288	0.00085	5.44E-04	
570	0.642391	0.000925	5.94E-04	
575	0.639612	0.0014525	9.29E-04	
580	0.643337	0.00198	1.27E-03	
585	0.644115	0.0047175	3.04E-03	
590	0.649333	0.0078	5.06E-03	
595	0.648624	0.0114	7.39E-03	
600	0.649864	0.015	9.75E-03	
605	0.646072	0.026263	1.70E-02	
610	0.645399	0.052	3.36E-02	
615	0.647059	0.088388	5.72E-02	
620	0.648267	0.175	1.13E-01	
625	0.646962	0.43288	2.80E-01	
630	0.650118	0.6138	3.99E-01	
635	0.649773	0.67756	4.40E-01	
640	0.652985	0.7448	4.86E-01	
645	0.65224	0.82458	5.38E-01	
650	0.653574	0.8897	5.81E-01	
655	0.654633	0.89654	5.87E-01	
660	0.652208	0.9034	5.89E-01	
665	0.652437	0.91051	5.94E-01	
670	0.65309	0.9172	5.99E-01	
675	0.653649	0.92241	6.03E-01	
680	0.651849	0.9276	6.05E-01	
685	0.64962	0.93254	6.06E-01	
690	0.647995	0.9379	6.08E-01	
695	0.645216	0.9448	6.10E-01	

700	0.63825	0.9517	6.07E-01	
705	0.639046	0.9586	6.13E-01	
710	0.639799	0.9655	6.18E-01	
715	0.642251	0.97304	6.25E-01	
720	0.63993	0.9793	6.27E-01	
725	0.641734	0.9802	6.29E-01	
730	0.637895	0.9828	6.27E-01	
735	0.63582	0.98838	6.28E-01	
740	0.633357	0.9931	6.29E-01	
745	0.634792	0.99719	6.33E-01	
750	0.634982	1	6.35E-01	
755	0.634547	1	6.35E-01	
760	0.63337	1	6.33E-01	
765	0.632766	1	6.33E-01	
770	0.633066	1	6.33E-01	
775	0.632405	0.99814	6.31E-01	
780	0.632612	0.9966	6.30E-01	
785	0.629659	0.99543	6.27E-01	
790	0.630262	0.9945	6.27E-01	
795	0.625341	0.9938	6.21E-01	
800	0.622743	0.9931	6.18E-01	
805	0.619284	0.9862	6.11E-01	
810	0.616154	0.9793	6.03E-01	
815	0.612317	0.97283	5.96E-01	
820	0.610997	0.9655	5.90E-01	
825	0.607986	0.95515	5.81E-01	
830	0.605761	0.9448	5.72E-01	
835	0.605239	0.93402	5.65E-01	
840	0.599233	0.9241	5.54E-01	
845	0.596313	0.9172	5.47E-01	
850	0.583535	0.9103	5.31E-01	
855	0.567711	0.86334	4.90E-01	
860	0.555024	0.8	4.44E-01	
865	0.560057	0.72848	4.08E-01	
870	0.56999	0.6552	3.73E-01	
875	0.576585	0.58016	3.35E-01	
880	0.568784	0.5034	2.86E-01	
885	0.560269	0.42523	2.38E-01	
890	0.542272	0.3448	1.87E-01	
895	0.528027	0.25704	1.36E-01	
900	0.519858	0.175	9.10E-02	
<b>SUM</b>		30.27730284		
<b>T<sub>nv</sub>g(SUM/NVG)</b>		0.621729413	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>	

## **TRAINER**

## **T- 38**

**Aircraft:** T-38

**Part Name:** Windscreen, PPG

**Manufactured:** N/A

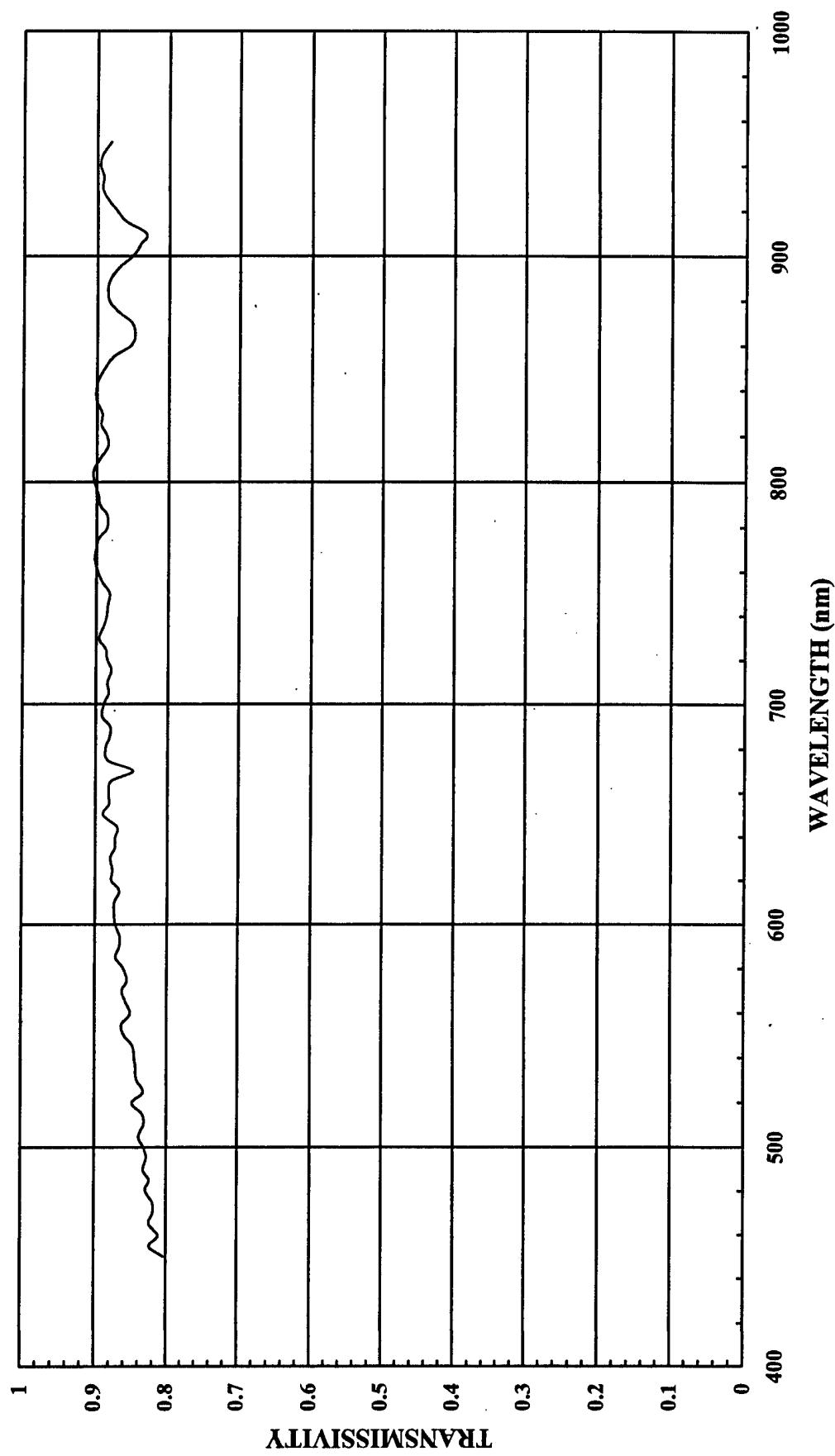
**S/N#** 970

**Material Type:** N/A

**Construction:** N/A

**Coating:** Acrylic Monolith

**T-38 WINDSCREEN (PPG, ACRYLIC MONOLITH, S/N# 970) @ NORMAL  
T<sub>avg</sub> = 89%**



T-38, PPG, ACRYLIC MONOLITH, S/N# 970, @ NORMAL			
	SPECTRA- RADIOMETRIC READING	RELATIVE SPECTRAL SENSITIVITY "INVIS A"	NVG SPECTRAL RESPONSE
450	0.803653	0.0001	8.03653E-05
455	0.823913	0.0001125	9.26902E-05
460	0.811359	0.000123	9.97972E-05
465	0.8243243	0.0001375	0.000113345
470	0.819209	0.00015	0.000122881
475	0.8191682	0.00016172	0.000132476
480	0.8292683	0.000175	0.000145122
485	0.8240271	0.00019375	0.000159655
490	0.8325359	0.0002125	0.000176914
495	0.8281017	0.00022266	0.000184385
500	0.8321168	0.0002375	0.000197628
505	0.8389459	0.00027656	0.000232019
510	0.8316401	0.0003125	0.000259888
515	0.8344733	0.00034279	0.000286049
520	0.8484076	0.000375	0.000318153
525	0.8329298	0.00041875	0.000348789
530	0.8421701	0.0004625	0.000389504
535	0.8434783	0.00050703	0.000427669
540	0.8452237	0.00055	0.000464873
545	0.8481735	0.00058359	0.000494986
550	0.8598028	0.000625	0.000537377
555	0.8627027	0.0007	0.000603892
560	0.8508403	0.000775	0.000659401
565	0.857868	0.00085	0.000729188
570	0.8624754	0.000925	0.00079779
575	0.8556304	0.0014525	0.001242803
580	0.8609779	0.00198	0.001704736
585	0.871673	0.0047175	0.004112117
590	0.8664824	0.0078	0.006758563
595	0.8657367	0.0114	0.009869398
600	0.8721499	0.015	0.013082249
605	0.8734277	0.026263	0.022938832
610	0.8736177	0.052	0.04542812
615	0.8668321	0.088388	0.076617556
620	0.8778822	0.175	0.153629385
625	0.8761823	0.43288	0.379281794
630	0.879397	0.6138	0.539773879
635	0.8730549	0.67756	0.591547078
640	0.8728139	0.7448	0.650071793
645	0.8700696	0.82458	0.717441991
650	0.8896658	0.8897	0.791535662
655	0.881459	0.89654	0.790263252
660	0.8817292	0.9034	0.796554159
665	0.8782687	0.91051	0.799672434
670	0.8483146	0.9172	0.778074151
675	0.8831614	0.92241	0.814636907
680	0.8863637	0.9276	0.822190968
685	0.8810572	0.93254	0.821621081
690	0.8798498	0.9379	0.825211127
695	0.8913526	0.9448	0.842149936

700	0.8887814	0.9517	0.845853258
705	0.8825623	0.9586	0.846024221
710	0.8841667	0.9655	0.853662949
715	0.8788356	0.97304	0.855142192
720	0.8846447	0.9793	0.866332555
725	0.8867069	0.9802	0.869150103
730	0.8963414	0.9828	0.880924328
735	0.8899083	0.98838	0.879567566
740	0.8857828	0.9931	0.879670899
745	0.8843106	0.99719	0.881825687
750	0.8817697	1	0.8817697
755	0.8915483	1	0.8915483
760	0.8979592	1	0.8979592
765	0.9027182	1	0.9027182
770	0.9008559	1	0.9008559
775	0.8976035	0.99814	0.895933957
780	0.886057	0.9966	0.883044406
785	0.8855564	0.99543	0.881509407
790	0.8957465	0.9945	0.890819894
795	0.8984375	0.9938	0.892867188
800	0.904022	0.9931	0.897784248
805	0.9049395	0.9862	0.892451335
810	0.8965517	0.9793	0.87799308
815	0.8849902	0.97283	0.860945016
820	0.8862512	0.9655	0.855675534
825	0.8944724	0.95515	0.854355313
830	0.8928571	0.9448	0.843571388
835	0.9004238	0.93402	0.841013838
840	0.9013157	0.9241	0.832905838
845	0.8982857	0.9172	0.823907644
850	0.8883553	0.9103	0.80866983
855	0.877193	0.86334	0.757315805
860	0.8541667	0.8	0.68333336
865	0.8479452	0.72848	0.617711119
870	0.8526012	0.6552	0.558624306
875	0.8708208	0.58016	0.505215395
880	0.8833866	0.5034	0.444696814
885	0.8856655	0.42523	0.376611541
890	0.8816029	0.3448	0.303976668
895	0.8706564	0.25704	0.223793521
900	0.8501027	0.175	0.148767973
905	0.8412017	0.11009	0.092607895
910	0.8325991	0.0621	0.051704404
915	0.8615023	0.043125	0.037152287
920	0.8737864	0.0276	0.024116505
925	0.8852041	0.015525	0.013742794
930	0.8930481	0.0069	0.006162032
935	0.8917379	0	0
940	0.8961424	0	0
945	0.8934169	0	0
950	0.8807947	0	0
<b>SUM</b>		<b>43.11545021</b>	
<b>T<sub>nv</sub>g(SUM/NVG)</b>		<b>0.885354409</b>	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

## **T- 38**

**Aircraft:** T-38

**Part Name:** Windscreen, PPG

**Manufactured:** N/A

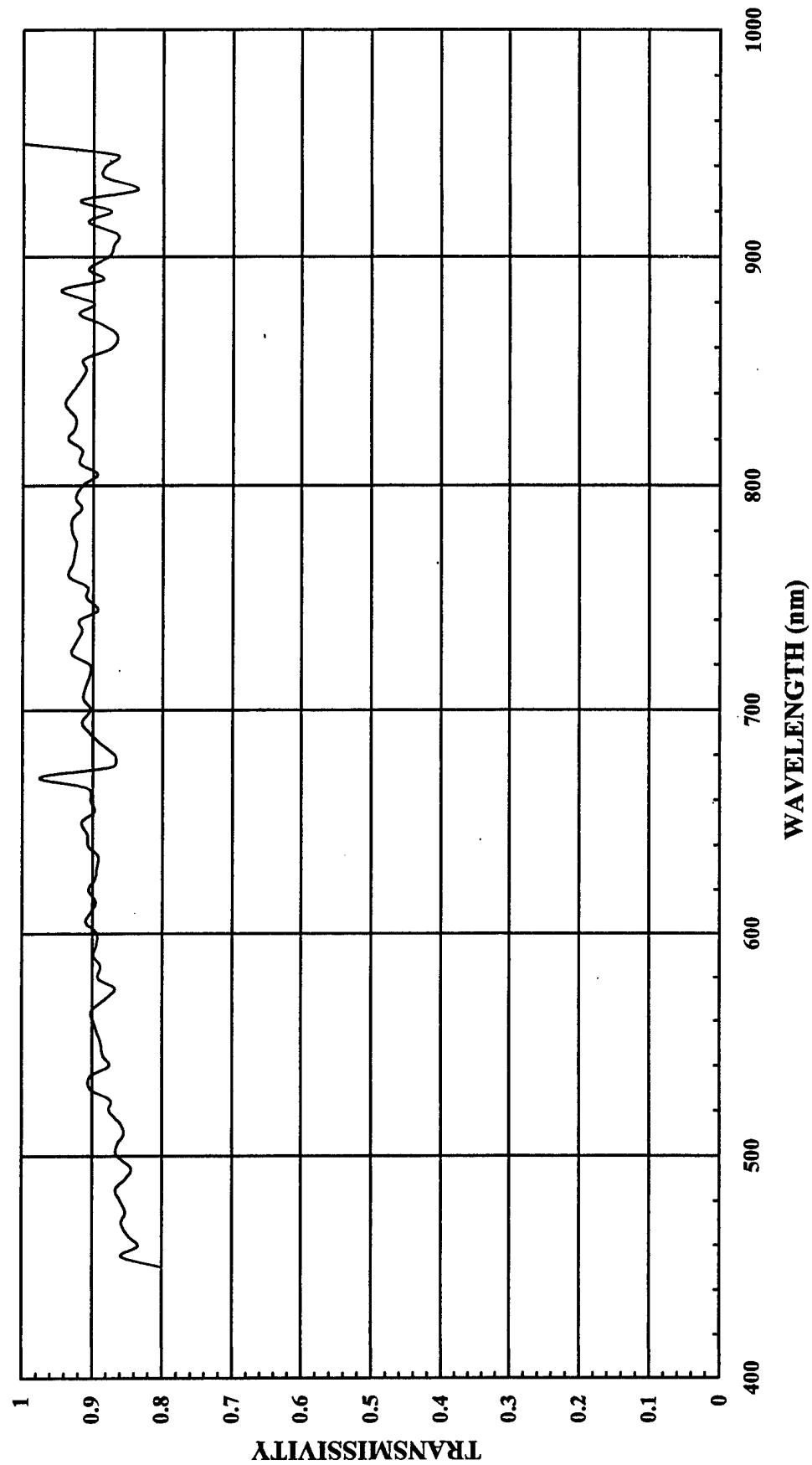
**S/N#** PPG-862

**Material Type:** N/A

**Construction:** N/A

**Coating:** N/A

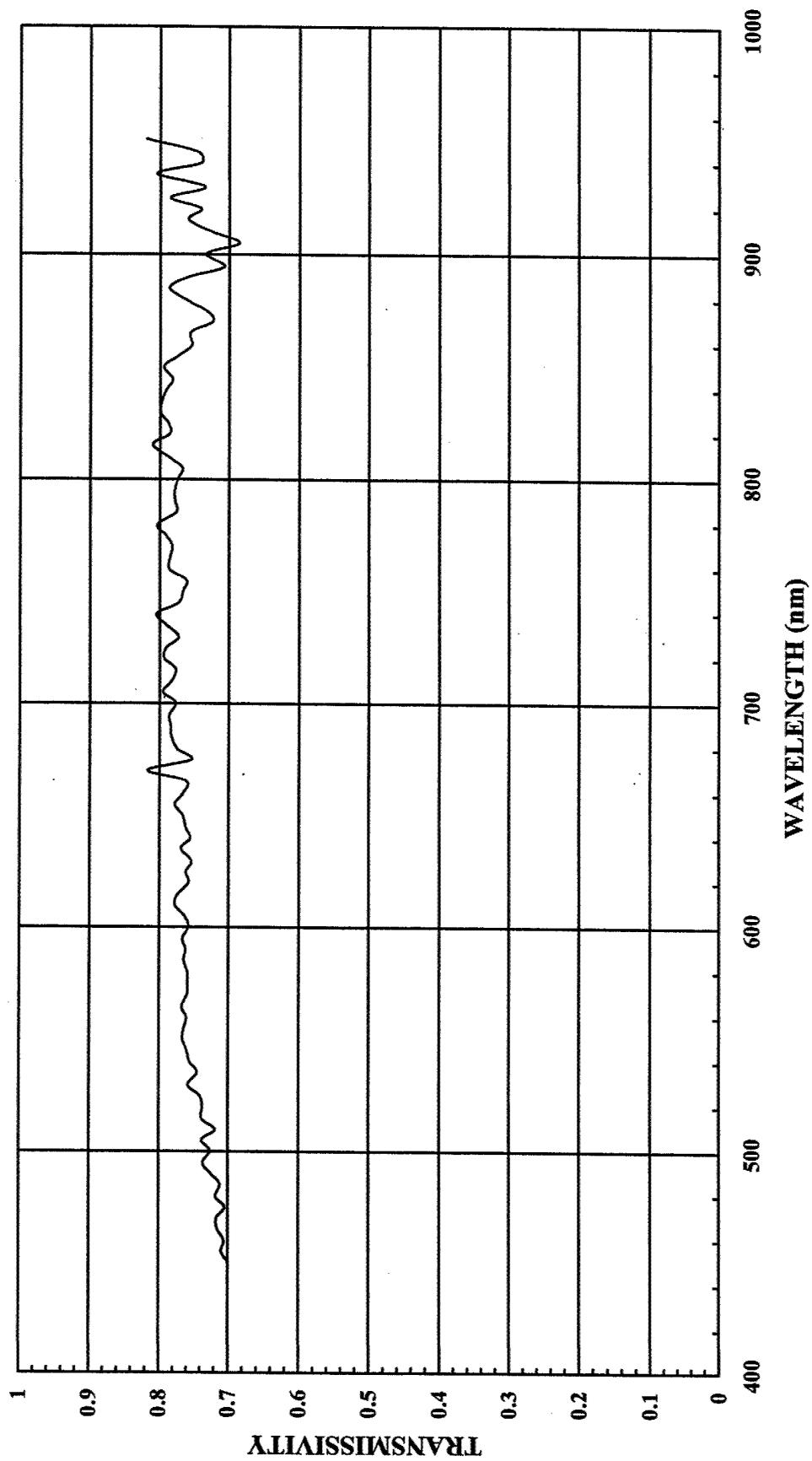
T38/F-5 WINDSCREEN (PPG, S/N# PPG-862) @ NORMAL  
T<sub>avg</sub> = 91 %



<u>T-38/F-5, PPG, S/N# PPG-862 @ NORMAL</u>			
<u>WAVELENGTH(nm)</u>	<u>SPECTRA- RADIOMETRIC READING</u>	<u>RELATIVE SPECTRAL SENSITIVITY "NVIS A"</u>	<u>NVG SPECTRAL RESPONSE</u>
450	0.8000001	0.0001	8E-05
455	0.8581081	0.0001125	9.65372E-05
460	0.8343558	0.000123	0.000102626
465	0.8484849	0.0001375	0.000116667
470	0.8579882	0.00015	0.000128698
475	0.8522727	0.00016172	0.00013783
480	0.8587571	0.000175	0.000150282
485	0.8663101	0.00019375	0.000167848
490	0.8522167	0.0002125	0.000181096
495	0.8443397	0.00022266	0.000188001
500	0.8651163	0.0002375	0.000205465
505	0.8638498	0.00027656	0.000238906
510	0.8545454	0.0003125	0.000267045
515	0.8601694	0.00034279	0.000294857
520	0.875969	0.000375	0.000328488
525	0.8740458	0.00041875	0.000366007
530	0.9023438	0.0004625	0.000417334
535	0.9031008	0.00050703	0.000457899
540	0.8759398	0.00055	0.000481767
545	0.8850175	0.00058359	0.000516487
550	0.8881356	0.000625	0.000555085
555	0.8936878	0.0007	0.000625581
560	0.8983606	0.000775	0.000696229
565	0.9012739	0.00085	0.000766083
570	0.8810976	0.000925	0.000815015
575	0.8674699	0.0014525	0.00126
580	0.8915663	0.00198	0.001765301
585	0.8885449	0.0047175	0.004191711
590	0.8988096	0.0078	0.007010715
595	0.8945869	0.0114	0.010198291
600	0.8936171	0.015	0.013404257
605	0.9098143	0.026263	0.023894453
610	0.9024391	0.052	0.046926833
615	0.8953168	0.088388	0.079135261
620	0.9059829	0.175	0.158547008
625	0.8963585	0.43288	0.388015667
630	0.8943089	0.6138	0.548926803
635	0.8923884	0.67756	0.604646684
640	0.9065657	0.7448	0.675210133
645	0.9072681	0.82458	0.74811513
650	0.9156327	0.8897	0.814638413
655	0.8977556	0.89654	0.804873806
660	0.9028872	0.9034	0.815668296
665	0.9074733	0.91051	0.826263514
670	0.9756097	0.9172	0.894829217
675	0.8717949	0.92241	0.804152334
680	0.8676471	0.9276	0.80482945

685	0.8893805	0.93254	0.829382891
690	0.905303	0.9379	0.849083684
695	0.9152542	0.9448	0.864732168
700	0.9036144	0.9517	0.859969824
705	0.9135447	0.9586	0.875723949
710	0.9111111	0.9655	0.879677767
715	0.9048913	0.97304	0.880495431
720	0.9048913	0.9793	0.88616005
725	0.9301676	0.9802	0.911750282
730	0.9252873	0.9828	0.909372358
735	0.9156626	0.98838	0.905022601
740	0.9198719	0.9931	0.913524784
745	0.8930818	0.99719	0.89057224
750	0.9096573	1	0.9096573
755	0.9082568	1	0.9082568
760	0.9349844	1	0.9349844
765	0.9294478	1	0.9294478
770	0.9263803	1	0.9263803
775	0.9240507	0.99814	0.922331966
780	0.9302326	0.9966	0.927069809
785	0.9303136	0.99543	0.926062067
790	0.9163637	0.9945	0.9113237
795	0.9250937	0.9938	0.919358119
800	0.9143969	0.9931	0.908087561
805	0.8937008	0.9862	0.881367729
810	0.9196787	0.9793	0.900641351
815	0.9159664	0.97283	0.891079593
820	0.9358974	0.9655	0.90360894
825	0.9264069	0.95515	0.884857551
830	0.9257642	0.9448	0.874662016
835	0.9400921	0.93402	0.878064823
840	0.9320388	0.9241	0.861297055
845	0.9207921	0.9172	0.844550514
850	0.9105263	0.9103	0.828852091
855	0.9139785	0.86334	0.789074198
860	0.8743169	0.8	0.69945352
865	0.8662791	0.72848	0.631066999
870	0.8882353	0.6552	0.581971769
875	0.9207317	0.58016	0.534171703
880	0.899371	0.5034	0.452743361
885	0.9466667	0.42523	0.402551081
890	0.8866667	0.3448	0.305722678
895	0.9071428	0.25704	0.233171985
900	0.8778626	0.175	0.153625955
905	0.8709677	0.11009	0.095884834
910	0.8655462	0.0621	0.053750419
915	0.9074075	0.043125	0.039131948
920	0.875	0.0276	0.02415
925	0.9183673	0.015525	0.014257652
930	0.8367347	0.0069	0.005773469
935	0.8850574	0	0
940	0.8823529	0	0
945	0.8658536	0	0
950	1.013889	0	0
<b>SUM:</b>		<b>44.4287962</b>	
<b>T<sub>nvG</sub>(SUM/NVG):</b>		<b>0.912323319</b>	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

T38/F-5 WINDSCREEN (PPG, S/N# PPG-862) @ DESIGN EYE  
 $T_{avg} = 78\%$



<u>T-38/F-5, PPG, S/N# PPG-862 @ DESIGN EYE</u>			
	<u>SPECTRA- RADIOMETRIC</u>	<u>RELATIVE SPECTRAL SENSITIVITY</u>	<u>NVG SPECTRAL RESPONSE</u>
<u>WAVELENGTH(nm)</u>	<u>READING</u>	<u>"NVIS A"</u>	
450	0.7	0.0001	0.00007
455	0.7094594	0.0001125	7.98142E-05
460	0.7055215	0.000123	8.67791E-05
465	0.7151515	0.0001375	9.83333E-05
470	0.7159764	0.00015	0.000107396
475	0.7045454	0.00016172	0.000113939
480	0.7175142	0.000175	0.000125565
485	0.71123	0.00019375	0.000137801
490	0.7241379	0.0002125	0.000153879
495	0.7358491	0.00022266	0.000163844
500	0.7255814	0.0002375	0.000172326
505	0.7370892	0.00027656	0.000203849
510	0.7181818	0.0003125	0.000224432
515	0.7372881	0.00034279	0.000252735
520	0.7364341	0.000375	0.000276163
525	0.740458	0.00041875	0.000310067
530	0.7578125	0.0004625	0.000350488
535	0.744186	0.00050703	0.000377325
540	0.7556391	0.00055	0.000415602
545	0.7595818	0.00058359	0.000443284
550	0.7661017	0.000625	0.000478814
555	0.7641196	0.0007	0.000534884
560	0.7606558	0.000775	0.000589508
565	0.767516	0.00085	0.000652389
570	0.7591463	0.000925	0.00070221
575	0.7590361	0.0014525	0.0011025
580	0.7590362	0.00198	0.001502892
585	0.7647058	0.0047175	0.0036075
590	0.7619048	0.0078	0.005942857
595	0.7663818	0.0114	0.008736753
600	0.7579787	0.015	0.011369681
605	0.7639257	0.026263	0.020062981
610	0.7777778	0.052	0.040444446
615	0.7741047	0.088388	0.068421566
620	0.7578347	0.175	0.132621073
625	0.7619047	0.43288	0.329813307
630	0.7533876	0.6138	0.462429309
635	0.7690289	0.67756	0.521063221
640	0.7550505	0.7448	0.562361612
645	0.7619047	0.82458	0.628251378
650	0.7667494	0.8897	0.682176941
655	0.7780548	0.89654	0.69755725
660	0.7664042	0.9034	0.692369554
665	0.7615659	0.91051	0.693413368
670	0.8170731	0.9172	0.749419447
675	0.7538461	0.92241	0.695355181
680	0.7745098	0.9276	0.71843529

685	0.7831858	0.93254	0.730352086
690	0.7840909	0.9379	0.735398855
695	0.7864407	0.9448	0.743029173
700	0.7771084	0.9517	0.739574064
705	0.7953891	0.9586	0.762459991
710	0.7833334	0.9655	0.756308398
715	0.7771739	0.97304	0.756221292
720	0.7934783	0.9793	0.777053299
725	0.7905028	0.9802	0.774850845
730	0.7729885	0.9828	0.759693098
735	0.7921687	0.98838	0.7829637
740	0.8044872	0.9931	0.798936238
745	0.7735849	0.99719	0.771411126
750	0.7663552	1	0.7663552
755	0.7614679	1	0.7614679
760	0.7863777	1	0.7863777
765	0.7852761	1	0.7852761
770	0.7822086	1	0.7822086
775	0.7911392	0.99814	0.789667681
780	0.8039867	0.9966	0.801253145
785	0.7770035	0.99543	0.773452594
790	0.7781818	0.9945	0.7739018
795	0.7790263	0.9938	0.774196337
800	0.7743191	0.9931	0.768976298
805	0.7677165	0.9862	0.757122012
810	0.7871486	0.9793	0.770854624
815	0.8109244	0.97283	0.788891584
820	0.7863248	0.9655	0.759196594
825	0.7878788	0.95515	0.752542436
830	0.7991266	0.9448	0.755014812
835	0.797235	0.93402	0.744633435
840	0.7912621	0.9241	0.731205307
845	0.7821782	0.9172	0.717413845
850	0.7947368	0.9103	0.723448909
855	0.7741935	0.86334	0.668392216
860	0.7540984	0.8	0.60327872
865	0.755814	0.72848	0.550595383
870	0.7235295	0.6552	0.474056528
875	0.7317073	0.58016	0.424507307
880	0.7610063	0.5034	0.383090571
885	0.7866667	0.42523	0.334514281
890	0.7600001	0.3448	0.262048034
895	0.7071428	0.25704	0.181763985
900	0.7328244	0.175	0.12824427
905	0.6854838	0.11009	0.075464912
910	0.7226891	0.0621	0.044878993
915	0.7592593	0.043125	0.032743057
920	0.7403846	0.0276	0.020434615
925	0.7857143	0.015525	0.012198215
930	0.7346939	0.0069	0.005069388
935	0.8045976	0	0
940	0.7411764	0	0
945	0.7439024	0	0
950	0.8194444	0	0
<b>SUM:</b>		37.88656909	
<b>Tavg(SUM/NVG):</b>		0.777981926	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

## **T-38/F-5**

**Aircraft:** T-38/F-5

**Part Name:** Canopy, SWEDLOW

**Manufactured:** 1/88

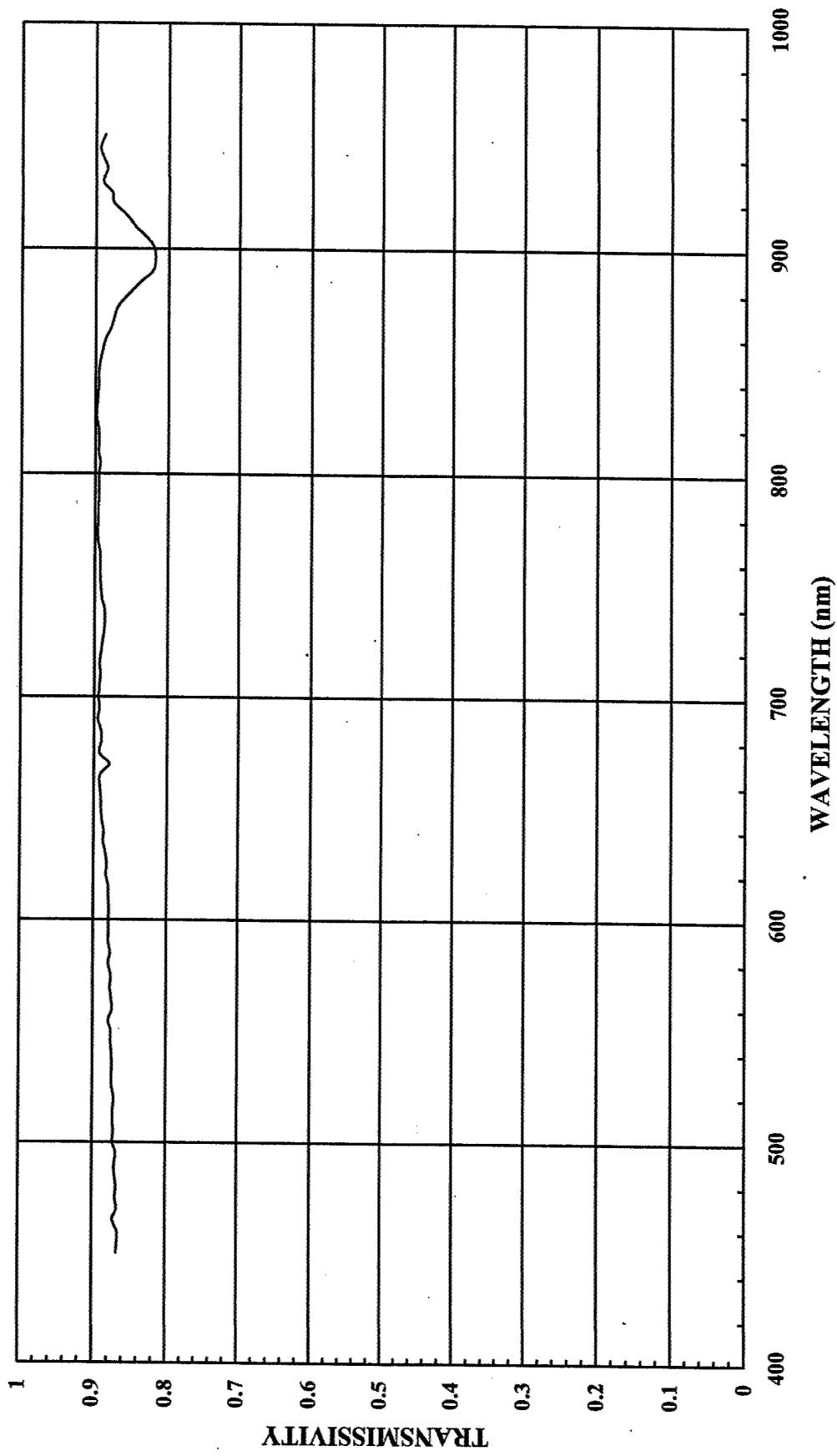
**S/N#** SWU 2923

**Material Type:** N/A

**Construction:** N/A

**Coating:** N/A

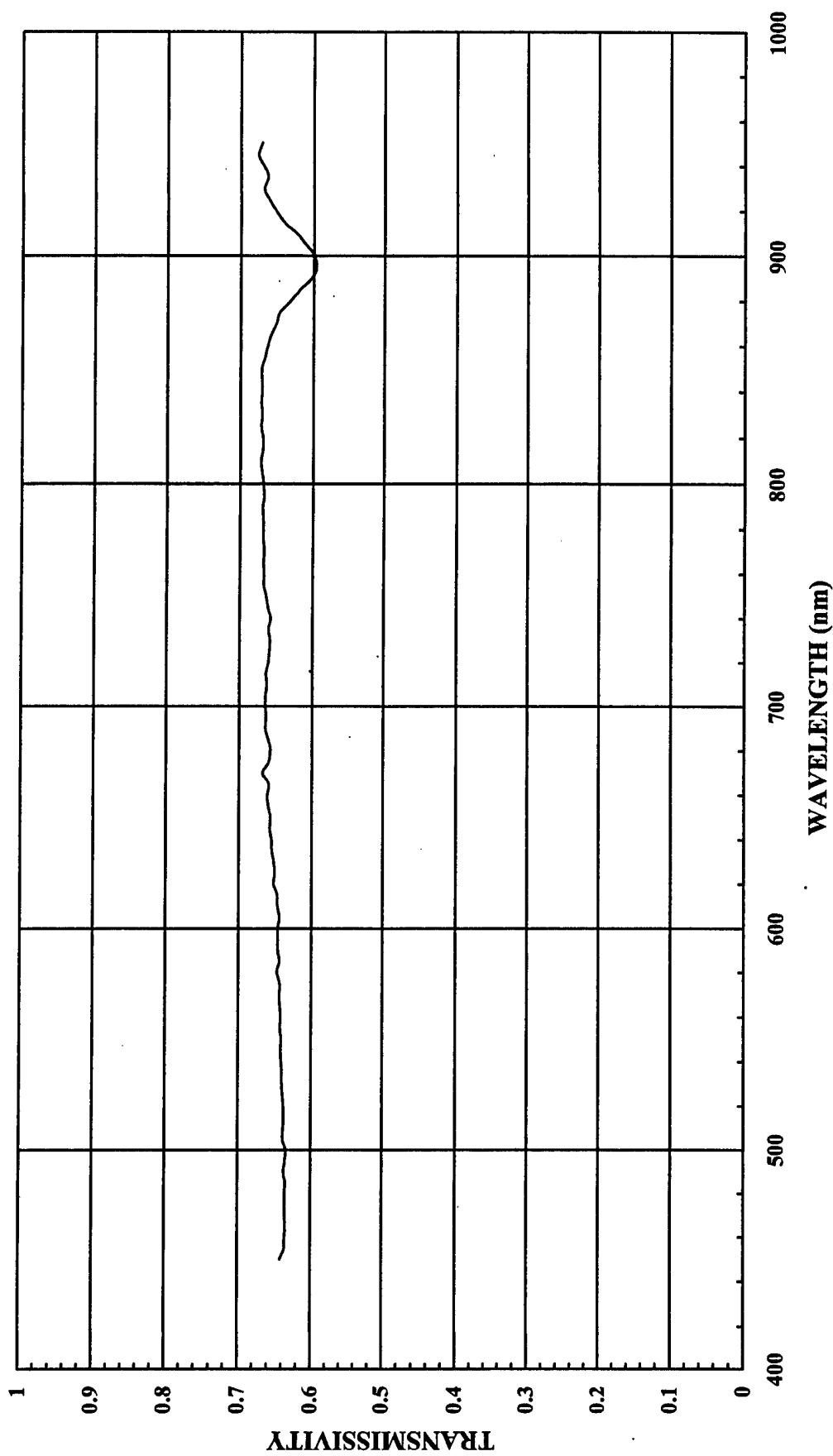
T-38/F-5 CANOPY (SWEDLOW, S/N# SWU 2923) @ NORMAL  
T<sub>avg</sub> = 89%



<u>T-38/F-5, SWEDLOW, CANOPY, S/N# SWU 2923 @ NORMAL</u>				
WAVELENGTH(nm)	READING	<u>SPECTRA-</u>	<u>RELATIVE</u>	<u>NVG</u>
		<u>RADIOMETRIC</u>	<u>SPECTRAL SENSITIVITY</u>	<u>SPECTRAL</u>
		"NVIS A"		<u>RESPONSE</u>
450	0.8670887		0.0001	8.67089E-05
455	0.8660477		0.0001125	9.74304E-05
460	0.8659218		0.000123	0.000106508
465	0.8721273		0.0001375	0.000119918
470	0.8668571		0.00015	0.000130029
475	0.8685369		0.00016172	0.00014046
480	0.8676858		0.000175	0.000151845
485	0.8694758		0.00019375	0.000168461
490	0.870073		0.0002125	0.000184891
495	0.8683258		0.00022266	0.000193341
500	0.8726311		0.0002375	0.00020725
505	0.8716577		0.00027656	0.000241066
510	0.872397		0.0003125	0.000272624
515	0.8724023		0.00034279	0.000299051
520	0.8712034		0.000375	0.000326701
525	0.8736141		0.00041875	0.000365826
530	0.8739716		0.0004625	0.000404212
535	0.8738739		0.00050703	0.00044308
540	0.874405		0.00055	0.000480923
545	0.8757764		0.00058359	0.000511094
550	0.8756219		0.000625	0.000547264
555	0.8789955		0.0007	0.000615297
560	0.8740433		0.000775	0.000677384
565	0.8756173		0.00085	0.000744275
570	0.8768679		0.000925	0.000811103
575	0.8760211		0.0014525	0.001272421
580	0.8796296		0.00198	0.001741667
585	0.8771527		0.0047175	0.004137968
590	0.8796761		0.0078	0.006861474
595	0.8791965		0.0114	0.01002284
600	0.879064		0.015	0.01318596
605	0.8789536		0.026263	0.023083958
610	0.8797029		0.052	0.045744551
615	0.8799301		0.088388	0.077775262
620	0.8830833		0.175	0.154539578
625	0.8820166		0.43288	0.381807346
630	0.8841758		0.6138	0.542707106
635	0.8871528		0.67756	0.601099251
640	0.8863746		0.7448	0.660171802
645	0.8890982		0.82458	0.733132594
650	0.8902726		0.8897	0.792075532
655	0.8904268		0.89654	0.798303243
660	0.8916914		0.9034	0.805554011
665	0.8913756		0.91051	0.811606398
670	0.8791019		0.9172	0.806312263
675	0.8926316		0.92241	0.823372314
680	0.8898809		0.9276	0.825453523
685	0.890583		0.93254	0.830504271
690	0.894958		0.9379	0.839381108

695	0.8932753	0.9448	0.843966503
700	0.8939171	0.9517	0.850740904
705	0.893225	0.9586	0.856245485
710	0.8918166	0.9655	0.861048927
715	0.8927543	0.97304	0.868685644
720	0.8911881	0.9793	0.872740506
725	0.8892981	0.9802	0.871689998
730	0.8872652	0.9828	0.872004239
735	0.886215	0.98838	0.875917182
740	0.8868337	0.9931	0.880714547
745	0.8905004	0.99719	0.887998094
750	0.8919423	1	0.8919423
755	0.8926205	1	0.8926205
760	0.8925068	1	0.8925068
765	0.8934122	1	0.8934122
770	0.8962736	1	0.8962736
775	0.8963603	0.99814	0.89469307
780	0.8957707	0.9966	0.89272508
785	0.8958334	0.99543	0.891739441
790	0.8952599	0.9945	0.890335971
795	0.895172	0.9938	0.889621934
800	0.8951929	0.9931	0.889016069
805	0.8932648	0.9862	0.880937746
810	0.8957617	0.9793	0.877219433
815	0.8950525	0.97283	0.870733924
820	0.8956311	0.9655	0.864731827
825	0.8988279	0.95515	0.858515469
830	0.8982467	0.9448	0.848663482
835	0.896954	0.93402	0.837772975
840	0.8955675	0.9241	0.827593927
845	0.8957677	0.9172	0.821598134
850	0.8935543	0.9103	0.813402479
855	0.8903374	0.86334	0.768663891
860	0.8868833	0.8	0.70950664
865	0.8796297	0.72848	0.640792644
870	0.8746123	0.6552	0.573045979
875	0.8691197	0.58016	0.504228485
880	0.8564454	0.5034	0.431134614
885	0.839747	0.42523	0.357085617
890	0.822905	0.3448	0.283737644
895	0.819042	0.25704	0.210526556
900	0.820529	0.175	0.143592575
905	0.8311518	0.11009	0.091501502
910	0.8466257	0.0621	0.052575456
915	0.8576513	0.043125	0.036986212
920	0.8760269	0.0276	0.024178342
925	0.8783151	0.015525	0.013635842
930	0.890535	0.0069	0.006144692
935	0.8845487	0	0
940	0.8895928	0	0
945	0.8939828	0	0
950	0.8875379	0	0
<b>SUM:</b>		43.30331826	
<b>Tnvg (SUM/NVG):</b>		0.889212187	(SPECTRAL TRANSMISSION COEFFICIENT)

T-38/F-5 CANOPY (SWEDLOW, S/N# SWU 2923) @ DESIGN EYE  
 $T_{avg} = 66\%$



**T-38/F-5, SWEDLOW, CANOPY, S/N# SWU 2923 @ DESIGN EYE**

	<u>SPECTRA- RADIOMETRIC</u>	<u>RELATIVE SPECTRAL SENSITIVITY</u>	<u>NVG SPECTRAL RESPONSE</u>
<u>WAVELENGTH(nm)</u>	<u>READING</u>	<u>"NVIS A"</u>	
450	0.6420535	0.0001	6.42054E-05
455	0.6359417	0.0001125	7.15434E-05
460	0.6356301	0.000123	7.81825E-05
465	0.6346494	0.0001375	8.72643E-05
470	0.6354286	0.00015	9.53143E-05
475	0.6353135	0.00016172	0.000102743
480	0.6352135	0.000175	0.000111162
485	0.6346351	0.00019375	0.000122961
490	0.636983	0.0002125	0.000135359
495	0.6352941	0.00022266	0.000141455
500	0.6342001	0.0002375	0.000150623
505	0.6385918	0.00027656	0.000176609
510	0.6380151	0.0003125	0.00019938
515	0.6375727	0.00034279	0.000218554
520	0.6378316	0.000375	0.000239187
525	0.6389505	0.00041875	0.000267561
530	0.6398654	0.0004625	0.000295938
535	0.640015	0.00050703	0.000324507
540	0.6411572	0.00055	0.000352636
545	0.6418219	0.00058359	0.000374561
550	0.6411277	0.000625	0.000400705
555	0.6428572	0.0007	0.00045
560	0.6422194	0.000775	0.00049772
565	0.6432099	0.00085	0.000546728
570	0.6437538	0.000925	0.000595472
575	0.6432322	0.0014525	0.000934295
580	0.6472801	0.00198	0.001281615
585	0.6440872	0.0047175	0.003038481
590	0.6460078	0.0078	0.005038861
595	0.6460481	0.0114	0.007364948
600	0.6463054	0.015	0.009694581
605	0.6439953	0.026263	0.016913249
610	0.6465372	0.052	0.033619934
615	0.6472791	0.088388	0.057211705
620	0.6523538	0.175	0.114161915
625	0.6507276	0.43288	0.281686963
630	0.6522733	0.6138	0.400365352
635	0.6550099	0.67756	0.443808508
640	0.6550313	0.7448	0.487867312
645	0.6576407	0.82458	0.542277368
650	0.6571899	0.8897	0.584701854
655	0.6597462	0.89654	0.591488858
660	0.6612265	0.9034	0.59735202
665	0.6593887	0.91051	0.600380005
670	0.6683938	0.9172	0.613050793
675	0.66	0.92241	0.6087906
680	0.6572421	0.9276	0.609657772
685	0.6605381	0.93254	0.6159782
690	0.6646295	0.9379	0.623356008

695	0.6634326	0.9448	0.62681112
700	0.6647076	0.9517	0.632602223
705	0.6644986	0.9586	0.636988358
710	0.6627818	0.9655	0.639915828
715	0.6638675	0.97304	0.645969632
720	0.6607766	0.9793	0.647098524
725	0.6596088	0.9802	0.646548546
730	0.6583159	0.9828	0.646992867
735	0.6607476	0.98838	0.653069713
740	0.6575809	0.9931	0.653043592
745	0.6613488	0.99719	0.65949041
750	0.6644155	1	0.6644155
755	0.6675806	1	0.6675806
760	0.6670384	1	0.6670384
765	0.6679799	1	0.6679799
770	0.6672478	1	0.6672478
775	0.6682201	0.99814	0.666977211
780	0.6681173	0.9966	0.665845701
785	0.6686047	0.99543	0.665549177
790	0.66947	0.9945	0.665787915
795	0.6676447	0.9938	0.663505303
800	0.6685299	0.9931	0.663917044
805	0.6703767	0.9862	0.661125502
810	0.6718213	0.9793	0.657914599
815	0.6692654	0.97283	0.651081459
820	0.6692961	0.9655	0.646205385
825	0.6718075	0.95515	0.641676934
830	0.6703194	0.9448	0.633317769
835	0.6714193	0.93402	0.627119055
840	0.6702485	0.9241	0.619376639
845	0.6708639	0.9172	0.615316369
850	0.6710865	0.9103	0.610890041
855	0.6667945	0.86334	0.575670364
860	0.6634577	0.8	0.53076616
865	0.6590909	0.72848	0.480134539
870	0.651307	0.6552	0.426736346
875	0.6469492	0.58016	0.375334048
880	0.6333008	0.5034	0.318803623
885	0.6183447	0.42523	0.262938717
890	0.603352	0.3448	0.20803577
895	0.596097	0.25704	0.153220773
900	0.5994962	0.175	0.104911835
905	0.6112566	0.11009	0.067293239
910	0.6230402	0.0621	0.038690796
915	0.6398576	0.043125	0.027593859
920	0.6527259	0.0276	0.018015235
925	0.6614664	0.015525	0.010269266
930	0.6683127	0.0069	0.004611358
935	0.6631945	0	0
940	0.6687783	0	0
945	0.6762177	0	0
950	0.6707193	0	0
<b>SUM:</b>		32.23754661	
<b>T<sub>nvg</sub> (SUM/NVG):</b>		0.661982048	(SPECTRAL TRANSMISSION COEFFICIENT)

# **T- 38**

**Aircraft:** T-38

**Part Name:** Windscreen, PPG

**Manufactured:** N/A

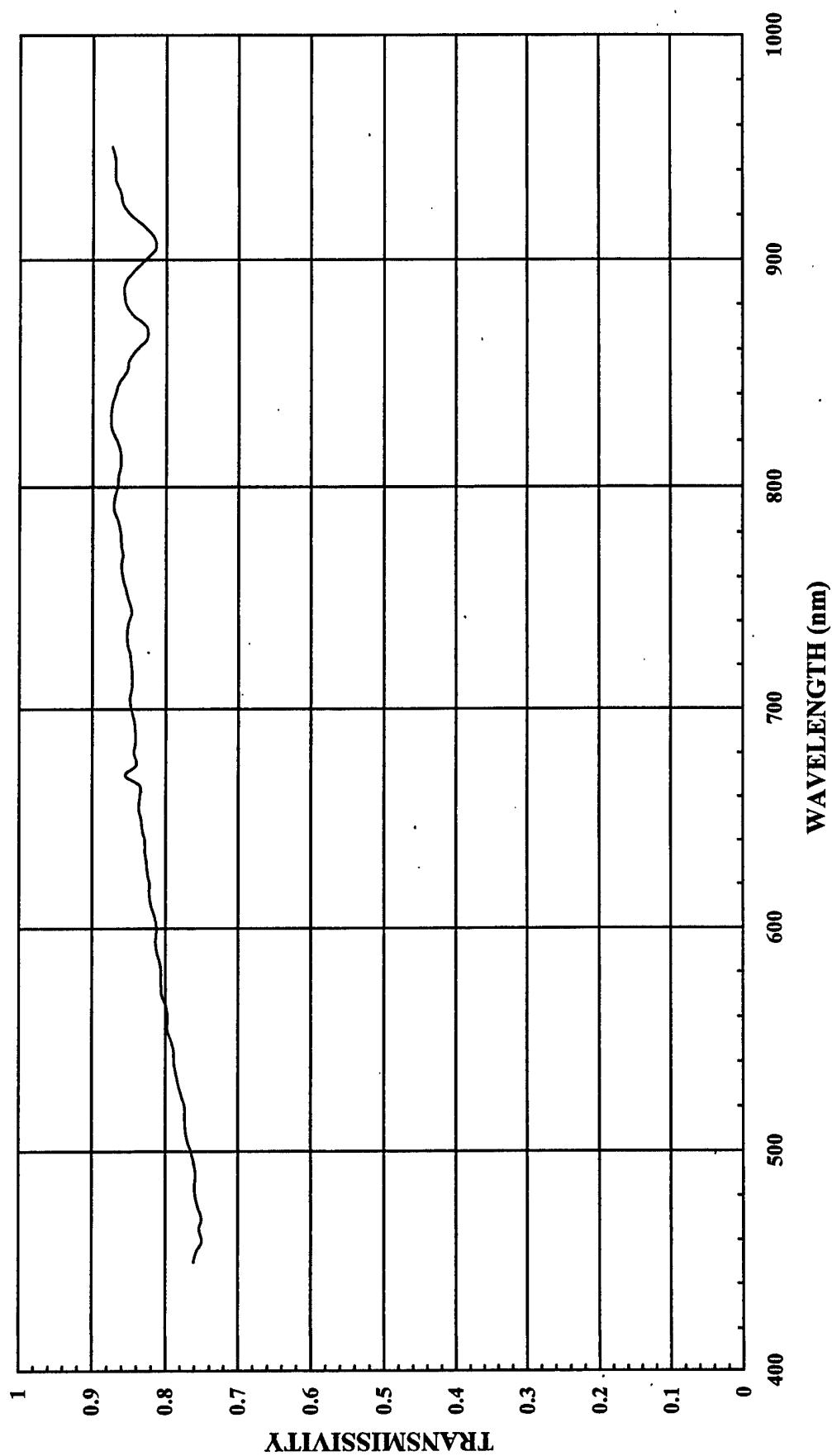
**S/N#** 900

**Material Type:** N/A

**Construction:** N/A

**Coating:** Self-Healing

T38/F5 WINDSCREEN (PPG, SELF HEALING COATING, S/N# 900) @ NORMAL  
 $T_{vug} = 85\%$

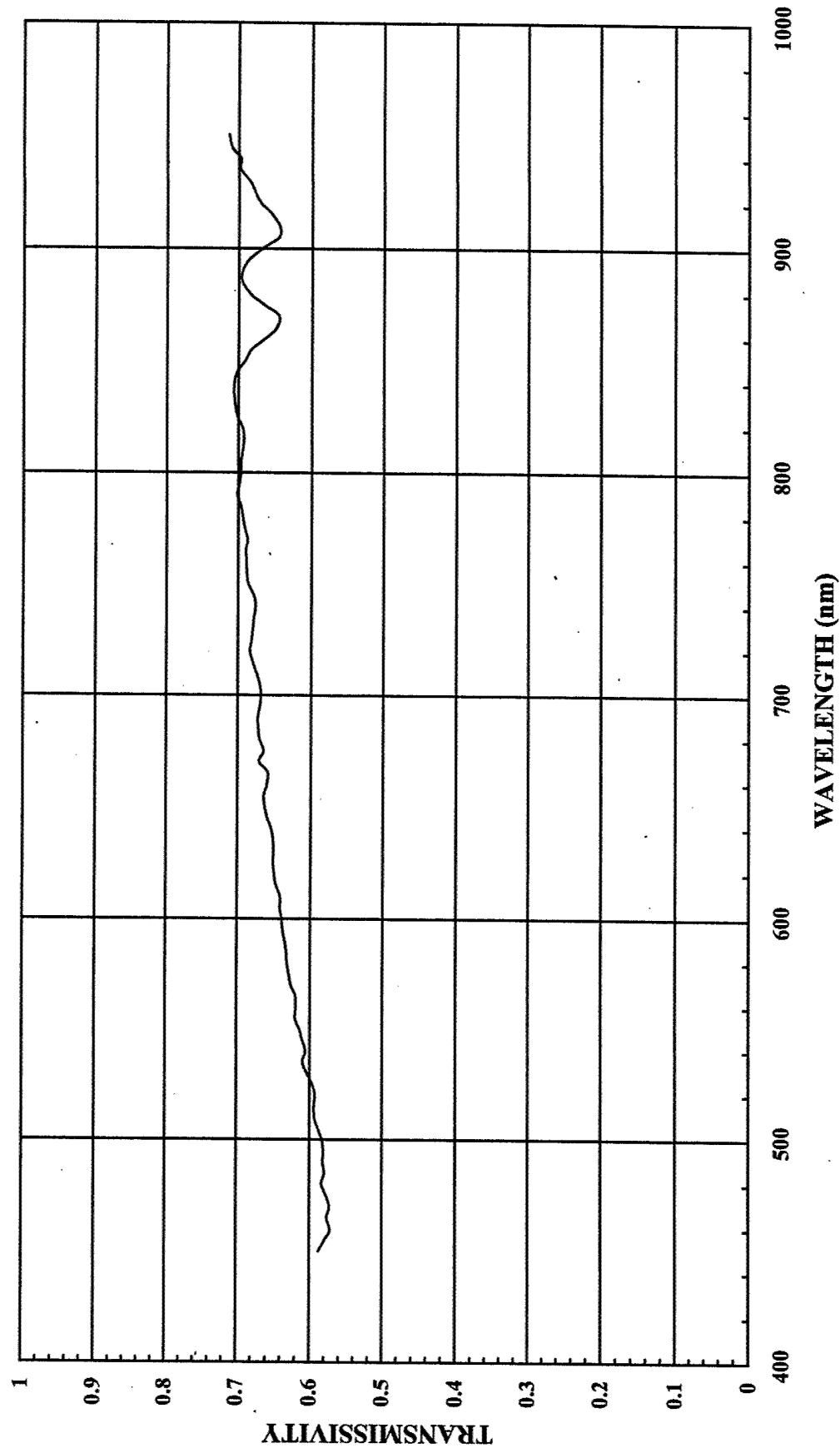


**T-38/F-5, PPG, SELF HEALING, S/N# 900, @ NORMAL**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG SPECTRAL RESPONSE
	RADIOMETRIC	SPECTRAL SENSITIVITY	
	READING	"NVIS A"	
450	0.7610682	0.0001	7.61068E-05
455	0.7577354	0.0001125	8.52452E-05
460	0.7501531	0.000123	9.22688E-05
465	0.7534884	0.0001375	0.000103605
470	0.7502819	0.00015	0.000112542
475	0.7550244	0.00016172	0.000122103
480	0.759124	0.000175	0.000132847
485	0.7598785	0.00019375	0.000147226
490	0.758505	0.0002125	0.000161182
495	0.7611408	0.00022266	0.000169476
500	0.7646803	0.0002375	0.000181612
505	0.770044	0.00027656	0.000212963
510	0.7724891	0.0003125	0.000241403
515	0.7731538	0.00034279	0.000265029
520	0.773535	0.000375	0.000290076
525	0.7777374	0.00041875	0.000325678
530	0.7828655	0.0004625	0.000362075
535	0.7859531	0.00050703	0.000398502
540	0.7883369	0.00055	0.000433585
545	0.7890281	0.00058359	0.000460469
550	0.7928782	0.000625	0.000495549
555	0.7981417	0.0007	0.000558699
560	0.7968603	0.000775	0.000617567
565	0.799818	0.00085	0.000679845
570	0.8053514	0.000925	0.00074495
575	0.8066092	0.0014525	0.0011716
580	0.8063781	0.00198	0.001596629
585	0.8087153	0.0047175	0.003815114
590	0.8126028	0.0078	0.006338302
595	0.8141524	0.0114	0.009281337
600	0.8126509	0.015	0.012189764
605	0.8150058	0.026263	0.021404497
610	0.819707	0.052	0.042624764
615	0.8225567	0.088388	0.072704142
620	0.8225273	0.175	0.143942278
625	0.8252627	0.43288	0.357239718
630	0.827	0.6138	0.5076126
635	0.8287037	0.67756	0.561496479
640	0.8286729	0.7448	0.617195576
645	0.8322895	0.82458	0.686289276
650	0.8344524	0.8897	0.7424123
655	0.8371246	0.89654	0.750515689
660	0.8360975	0.9034	0.755330482
665	0.8362069	0.91051	0.761374745
670	0.8561526	0.9172	0.785263165
675	0.8409207	0.92241	0.775673663
680	0.8439306	0.9276	0.782830025
685	0.8417832	0.93254	0.784996505
690	0.8421445	0.9379	0.789847327
695	0.8438115	0.9448	0.797233105
700	0.8480138	0.9517	0.807054733
705	0.8494537	0.9586	0.814286317
710	0.8471321	0.9655	0.817906043

715	0.8464622	0.97304	0.823641579
720	0.8476169	0.9793	0.83007123
725	0.8490352	0.9802	0.832224303
730	0.8526581	0.9828	0.837992381
735	0.8533211	0.98838	0.843405509
740	0.8511662	0.9931	0.845293153
745	0.847252	0.99719	0.844871222
750	0.8520221	1	0.8520221
755	0.8551181	1	0.8551181
760	0.8590929	1	0.8590929
765	0.8613454	1	0.8613454
770	0.8591732	1	0.8591732
775	0.8614471	0.99814	0.859844808
780	0.8622727	0.9966	0.859340973
785	0.8656251	0.99543	0.861669193
790	0.871262	0.9945	0.866470059
795	0.8707627	0.9938	0.865363971
800	0.866371	0.9931	0.86039304
805	0.8652865	0.9862	0.853345546
810	0.8622059	0.9793	0.844358238
815	0.8634204	0.97283	0.839961268
820	0.8674083	0.9655	0.837482714
825	0.8746178	0.95515	0.835391192
830	0.8755445	0.9448	0.827214444
835	0.8740335	0.93402	0.81636477
840	0.8698997	0.9241	0.803874313
845	0.8655052	0.9172	0.793841369
850	0.8541667	0.9103	0.777547947
855	0.8514701	0.86334	0.735108196
860	0.8416	0.8	0.67328
865	0.8275283	0.72848	0.602837816
870	0.8277385	0.6552	0.542334265
875	0.8449397	0.58016	0.490200216
880	0.8551927	0.5034	0.430504005
885	0.8581933	0.42523	0.364929537
890	0.8564246	0.3448	0.295295202
895	0.8453365	0.25704	0.217285294
900	0.8281053	0.175	0.144918428
905	0.8152245	0.11009	0.089748065
910	0.816825	0.0621	0.050724833
915	0.8294409	0.043125	0.035769639
920	0.8497024	0.0276	0.023451786
925	0.859813	0.015525	0.013348597
930	0.8627451	0.0069	0.005952941
935	0.869338	0	0
940	0.8698011	0	0
945	0.8698955	0	0
950	0.8739837	0	0
<b>SUM:</b>		<b>41.47950052</b>	
<b>T<sub>nv</sub>g(SUM/NVG):</b>		<b>0.851760993</b>	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

T38/F-5 (PPG, SELF-HEALING COATING, S/N# 900) @ DESIGN EYE  
 $T_{v\text{g}} = 68\%$



**T-38/F-5, PPG,SELF HEALING, S/N# 900 @ DESIGN EYE**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
	READING	"NVIS A"	RESPONSE
450	0.5874912	0.0001	5.87491E-05
455	0.5799869	0.0001125	6.52485E-05
460	0.5719535	0.000123	7.03503E-05
465	0.5761628	0.0001375	7.92224E-05
470	0.572717	0.00015	8.59076E-05
475	0.5768604	0.00016172	9.32899E-05
480	0.5834203	0.000175	0.000102099
485	0.5795339	0.00019375	0.000112285
490	0.5816962	0.0002125	0.00012361
495	0.5811052	0.00022266	0.000129389
500	0.583297	0.0002375	0.000138533
505	0.5881057	0.00027656	0.000162647
510	0.5934498	0.0003125	0.000185453
515	0.5940433	0.00034279	0.000203632
520	0.5924386	0.000375	0.000222164
525	0.5962169	0.00041875	0.000249666
530	0.6045052	0.0004625	0.000279584
535	0.6098105	0.00050703	0.000309192
540	0.6058316	0.00055	0.000333207
545	0.6105655	0.00058359	0.00035632
550	0.6148317	0.000625	0.00038427
555	0.6206344	0.0007	0.000434444
560	0.6194663	0.000775	0.000480086
565	0.6199575	0.00085	0.000526964
570	0.6262864	0.000925	0.000579315
575	0.6287357	0.0014525	0.000913239
580	0.6315489	0.00198	0.001250467
585	0.6324279	0.0047175	0.002983479
590	0.6345206	0.0078	0.004949261
595	0.6379929	0.0114	0.007273119
600	0.6388218	0.015	0.009582327
605	0.6415005	0.026263	0.016847728
610	0.641068	0.052	0.033335536
615	0.6470878	0.088388	0.057194796
620	0.6498855	0.175	0.113729963
625	0.6507815	0.43288	0.281710296
630	0.6505	0.6138	0.3992769
635	0.6510721	0.67756	0.441140412
640	0.6537914	0.7448	0.486943835
645	0.6592438	0.82458	0.543599253
650	0.6633348	0.8897	0.590180716
655	0.6640127	0.89654	0.595313946
660	0.6597561	0.9034	0.596023661
665	0.658944	0.91051	0.599975101
670	0.6707106	0.9172	0.615175762
675	0.6644501	0.92241	0.612895417
680	0.6705202	0.9276	0.621974538
685	0.6717657	0.93254	0.626448386
690	0.6727476	0.9379	0.630969974
695	0.6699411	0.9448	0.632960351
700	0.6681059	0.9517	0.635836385
705	0.6701306	0.9586	0.642387193
710	0.6740648	0.9655	0.650809564
715	0.6799528	0.97304	0.661621273

720	0.6833181	0.9793	0.669173415
725	0.6812713	0.9802	0.667782128
730	0.6798808	0.9828	0.66818685
735	0.6782749	0.98838	0.670393346
740	0.6761242	0.9931	0.671458943
745	0.6778491	0.99719	0.675944344
750	0.6861213	1	0.6861213
755	0.687964	1	0.687964
760	0.6884632	1	0.6884632
765	0.6895955	1	0.6895955
770	0.6871232	1	0.6871232
775	0.6910051	0.99814	0.689719831
780	0.6934091	0.9966	0.691051509
785	0.6963943	0.99543	0.693211778
790	0.7014698	0.9945	0.697611716
795	0.6988877	0.9938	0.694554596
800	0.6964236	0.9931	0.691618277
805	0.69654	0.9862	0.686927748
810	0.6943578	0.9793	0.679984594
815	0.6923991	0.97283	0.673586616
820	0.694528	0.9655	0.670566784
825	0.7015291	0.95515	0.67006552
830	0.7044182	0.9448	0.665534315
835	0.7061855	0.93402	0.659591381
840	0.7060201	0.9241	0.652433174
845	0.7020906	0.9172	0.643957498
850	0.6900585	0.9103	0.628160253
855	0.6819397	0.86334	0.588745821
860	0.664	0.8	0.5312
865	0.648762	0.72848	0.472610142
870	0.645318	0.6552	0.422812354
875	0.6652739	0.58016	0.385965306
880	0.683569	0.5034	0.344108635
885	0.6953782	0.42523	0.295695672
890	0.6949721	0.3448	0.23962638
895	0.6871311	0.25704	0.176620178
900	0.6662484	0.175	0.11659347
905	0.6454132	0.11009	0.071053539
910	0.6445047	0.0621	0.040023742
915	0.6557377	0.043125	0.028278688
920	0.6703869	0.0276	0.018502678
925	0.6775701	0.015525	0.010519276
930	0.6846405	0.0069	0.004724019
935	0.6977352	0	0
940	0.6971067	0	0
945	0.7094017	0	0
950	0.7134147	0	0
<b>SUM:</b>		33.11693022	
<b>T<sub>NVG</sub>(SUM/NVG):</b>		0.680039755	(SPECTRAL TRANSMISSION COEFFICIENT)

## **NAVY FIGHTER**

# **F-18**

**Aircraft:** F-18

**Part Name:** Windscreen, SIERRACIN

**Manufactured:** N/A

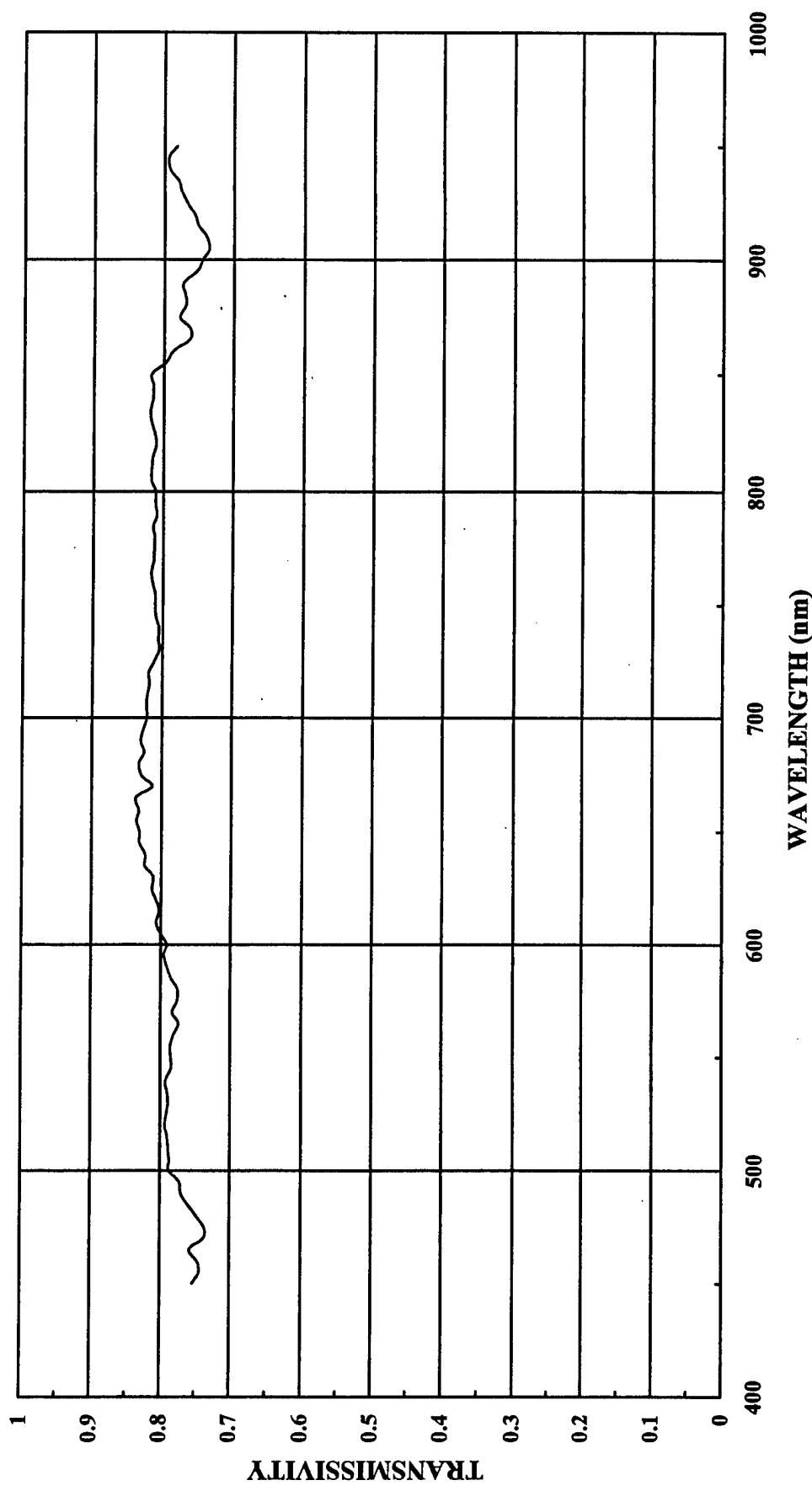
**S/N#** 168

**Material Type:** N/A

**Construction:** N/A

**Coating:** ITO S243 Process Coating

F-18 WINDSCREEN (SIERRACIN, ITO, S243 PROCESS COATING, S/N# 168)  
@ NORMAL  
 $T_{avg} = 81\%$

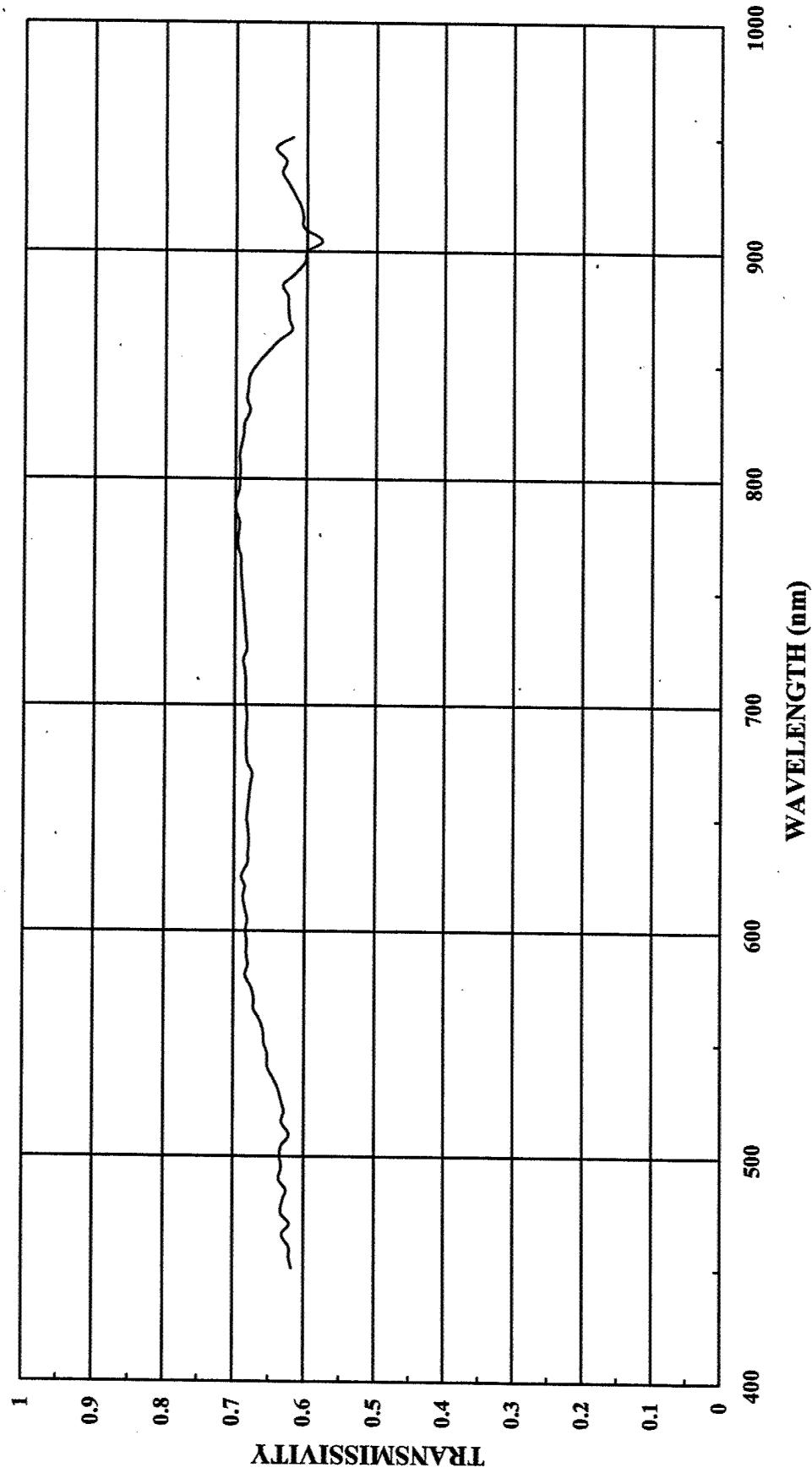


**F-18, SIERRACIN, ITO, S243 PROCESS, S/N# 168 @ NORMAL**

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
	READING	"NVIS A"	
450	0.7534562	0.0001	7.53456E-05
455	0.7440861	0.0001125	8.37097E-05
460	0.745491	0.000123	9.16954E-05
465	0.7572815	0.0001375	0.000104126
470	0.7378277	0.00015	0.000110674
475	0.7360862	0.00016172	0.00011904
480	0.7487001	0.000175	0.000131023
485	0.7600671	0.00019375	0.000147263
490	0.769968	0.0002125	0.000163618
495	0.7731343	0.00022266	0.000172146
500	0.7879234	0.0002375	0.000187132
505	0.7869822	0.00027656	0.000217648
510	0.7888563	0.0003125	0.000246518
515	0.7901908	0.00034279	0.00027087
520	0.7937106	0.000375	0.000297641
525	0.7916153	0.00041875	0.000331489
530	0.7889448	0.0004625	0.000364887
535	0.7907268	0.00050703	0.000400922
540	0.7929782	0.00055	0.000436138
545	0.7844926	0.00058359	0.000457822
550	0.7850876	0.000625	0.00049068
555	0.7859459	0.0007	0.000550162
560	0.782241	0.000775	0.000606237
565	0.7744898	0.00085	0.000658316
570	0.7832168	0.000925	0.000724476
575	0.7766991	0.0014525	0.001128155
580	0.7761768	0.00198	0.00153683
585	0.7854406	0.0047175	0.003705316
590	0.7911276	0.0078	0.006170795
595	0.7958656	0.0114	0.009072868
600	0.7917342	0.015	0.011876013
605	0.8006329	0.026263	0.021027022
610	0.8069468	0.052	0.041961234
615	0.8028643	0.088388	0.07096357
620	0.8077922	0.175	0.141363635
625	0.8134263	0.43288	0.352115977
630	0.8119731	0.6138	0.498389089
635	0.8241578	0.67756	0.558416359
640	0.8229167	0.7448	0.612908358
645	0.8317536	0.82458	0.685847383
650	0.8313725	0.8897	0.739672113
655	0.8361935	0.89654	0.74968092
660	0.8326395	0.9034	0.752206524
665	0.8369441	0.91051	0.762045972
670	0.8135594	0.9172	0.746196682
675	0.8291032	0.92241	0.764773083
680	0.8327759	0.9276	0.772482925
685	0.825465	0.93254	0.769779131
690	0.8302354	0.9379	0.778677782

695	0.8265957	0.9448	0.780967617
700	0.8219442	0.9517	0.782244295
705	0.8222222	0.9586	0.788182201
710	0.8218488	0.9655	0.793495016
715	0.8185419	0.97304	0.79647401
720	0.8200155	0.9793	0.803041179
725	0.8128834	0.9802	0.796788309
730	0.8051242	0.9828	0.791276064
735	0.8067823	0.98838	0.79740749
740	0.805691	0.9931	0.800131732
745	0.8103175	0.99719	0.808040508
750	0.8109568	1	0.8109568
755	0.81142	1	0.81142
760	0.8153054	1	0.8153054
765	0.8169935	1	0.8169935
770	0.8134978	1	0.8134978
775	0.8132842	0.99814	0.811771491
780	0.8122102	0.9966	0.809448685
785	0.8145425	0.99543	0.810820041
790	0.8098891	0.9945	0.80543471
795	0.8117117	0.9938	0.806679087
800	0.811215	0.9931	0.805617617
805	0.8173168	0.9862	0.806037828
810	0.8170378	0.9793	0.800125118
815	0.8155533	0.97283	0.793394717
820	0.8108652	0.9655	0.782890351
825	0.8128835	0.95515	0.776425675
830	0.8180861	0.9448	0.772927747
835	0.818872	0.93402	0.764842825
840	0.815523	0.9241	0.753624804
845	0.8151659	0.9172	0.747670163
850	0.817734	0.9103	0.74438326
855	0.7982005	0.86334	0.68911842
860	0.7861035	0.8	0.6288828
865	0.7631205	0.72848	0.555918022
870	0.7626113	0.6552	0.499662924
875	0.777605	0.58016	0.451135317
880	0.7693575	0.5034	0.387294566
885	0.7707232	0.42523	0.327734626
890	0.7729831	0.3448	0.266524573
895	0.7525151	0.25704	0.193426481
900	0.7452632	0.175	0.13042106
905	0.7358078	0.11009	0.081005081
910	0.7402299	0.0621	0.045968277
915	0.7517899	0.043125	0.032420939
920	0.756219	0.0276	0.020871644
925	0.7664042	0.015525	0.011898425
930	0.7756233	0.0069	0.005351801
935	0.7800586	0	0
940	0.7920489	0	0
945	0.7941176	0	0
950	0.782313	0	0
<b>SUM:</b>		39.58538831	
<b>Tnvg(SUM/NVG):</b>		0.812866337	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

F-18 WINDSCREEN (SIERRACIN, ITO, S243 PROCESS COATING, S/N# 168)  
@ DESIGN EYE  
T<sub>avg</sub> = 68%



**F-18, SIERRACIN, ITO, S243 PROCESS, S/N# 168 @ DESIGN EYE**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
	READING	"NVIS A"	RESPONSE
450	0.6175115	0.0001	6.17512E-05
455	0.6209151	0.0001125	6.98529E-05
460	0.6209677	0.000123	7.6379E-05
465	0.6308594	0.0001375	8.67432E-05
470	0.6204934	0.00015	9.3074E-05
475	0.6322464	0.00016172	0.000102247
480	0.6302083	0.000175	0.000110286
485	0.6256324	0.00019375	0.000121216
490	0.635634	0.0002125	0.000135072
495	0.6321321	0.00022266	0.000140751
500	0.6342183	0.0002375	0.000150627
505	0.6318927	0.00027656	0.000174756
510	0.6211454	0.0003125	0.000194108
515	0.6320109	0.00034279	0.000216647
520	0.6286439	0.000375	0.000235741
525	0.6324257	0.00041875	0.000264828
530	0.6372796	0.0004625	0.000294742
535	0.6445557	0.00050703	0.000326809
540	0.6521212	0.00055	0.000358667
545	0.6521739	0.00058359	0.000380602
550	0.6574279	0.000625	0.000410892
555	0.6580086	0.0007	0.000460606
560	0.6635021	0.000775	0.000514214
565	0.6721311	0.00085	0.000571311
570	0.6716418	0.000925	0.000621269
575	0.6754386	0.0014525	0.000981075
580	0.6841086	0.00198	0.001354535
585	0.6800767	0.0047175	0.003208262
590	0.6823637	0.0078	0.005322437
595	0.6815835	0.0114	0.007770052
600	0.6837816	0.015	0.010256724
605	0.6814932	0.026263	0.017898056
610	0.6844661	0.052	0.035592237
615	0.6872881	0.088388	0.060748021
620	0.6845754	0.175	0.119800695
625	0.6896251	0.43288	0.298524913
630	0.6813187	0.6138	0.418193418
635	0.680886	0.67756	0.461341118
640	0.679518	0.74448	0.506105006
645	0.6808847	0.82458	0.561443906
650	0.6823529	0.8897	0.607089375
655	0.6812159	0.89654	0.610737303
660	0.6797332	0.9034	0.614070973
665	0.6777523	0.91051	0.617100247
670	0.6756757	0.9172	0.619729752
675	0.6824325	0.92241	0.629482562
680	0.6835017	0.9276	0.634016177
685	0.6844381	0.93254	0.638265906
690	0.6836228	0.9379	0.641169824

695	0.6826923	0.9448	0.645007685
700	0.6843629	0.9517	0.651308172
705	0.6845878	0.9586	0.656245865
710	0.6845638	0.9655	0.660946349
715	0.6860558	0.97304	0.667559736
720	0.6881304	0.9793	0.673886101
725	0.6831149	0.9802	0.669589225
730	0.6847826	0.9828	0.673004339
735	0.6853755	0.98838	0.677411437
740	0.6870415	0.9931	0.682300914
745	0.6883426	0.99719	0.686408357
750	0.6896285	1	0.6896285
755	0.6908541	1	0.6908541
760	0.6919676	1	0.6919676
765	0.6918605	1	0.6918605
770	0.6960642	1	0.6960642
775	0.6960712	0.99814	0.694776508
780	0.6942724	0.9966	0.691911874
785	0.6987755	0.99543	0.695582096
790	0.7003425	0.9945	0.696490616
795	0.6949459	0.9938	0.690637235
800	0.6941839	0.9931	0.689394031
805	0.6935484	0.9862	0.683977432
810	0.6947674	0.9793	0.680385715
815	0.692	0.97283	0.67319836
820	0.6888217	0.9655	0.665057351
825	0.6878199	0.95515	0.656971177
830	0.6802935	0.9448	0.642741299
835	0.6843817	0.93402	0.639226195
840	0.6828442	0.9241	0.631016325
845	0.6804734	0.9172	0.624130202
850	0.670792	0.9103	0.610621958
855	0.6572164	0.86334	0.567401207
860	0.6404342	0.8	0.51234736
865	0.6212766	0.72848	0.452587578
870	0.6249999	0.6552	0.409499934
875	0.6263565	0.58016	0.363386987
880	0.6270627	0.5034	0.315663363
885	0.6347518	0.42523	0.269915508
890	0.6184211	0.3448	0.213231595
895	0.6028226	0.25704	0.154949521
900	0.5995808	0.175	0.10492664
905	0.5786026	0.11009	0.06369836
910	0.6046512	0.0621	0.03754884
915	0.6057693	0.043125	0.026123801
920	0.6089109	0.0276	0.016805941
925	0.6171875	0.015525	0.009581836
930	0.6270719	0.0069	0.004326796
935	0.6352941	0	0
940	0.6291793	0	0
945	0.6440129	0	0
950	0.620339	0	0
<b>SUM:</b>		33.11853249	
<b>T<sub>nvG</sub>(SUM/NVG):</b>		0.680072657	(SPECTRAL
			TRANSMISSION
			COEFFICIENT)

# **F-18**

**Aircraft:** F-18

**Part Name:** Windscreen, SIERRACIN

**Manufactured:** N/A

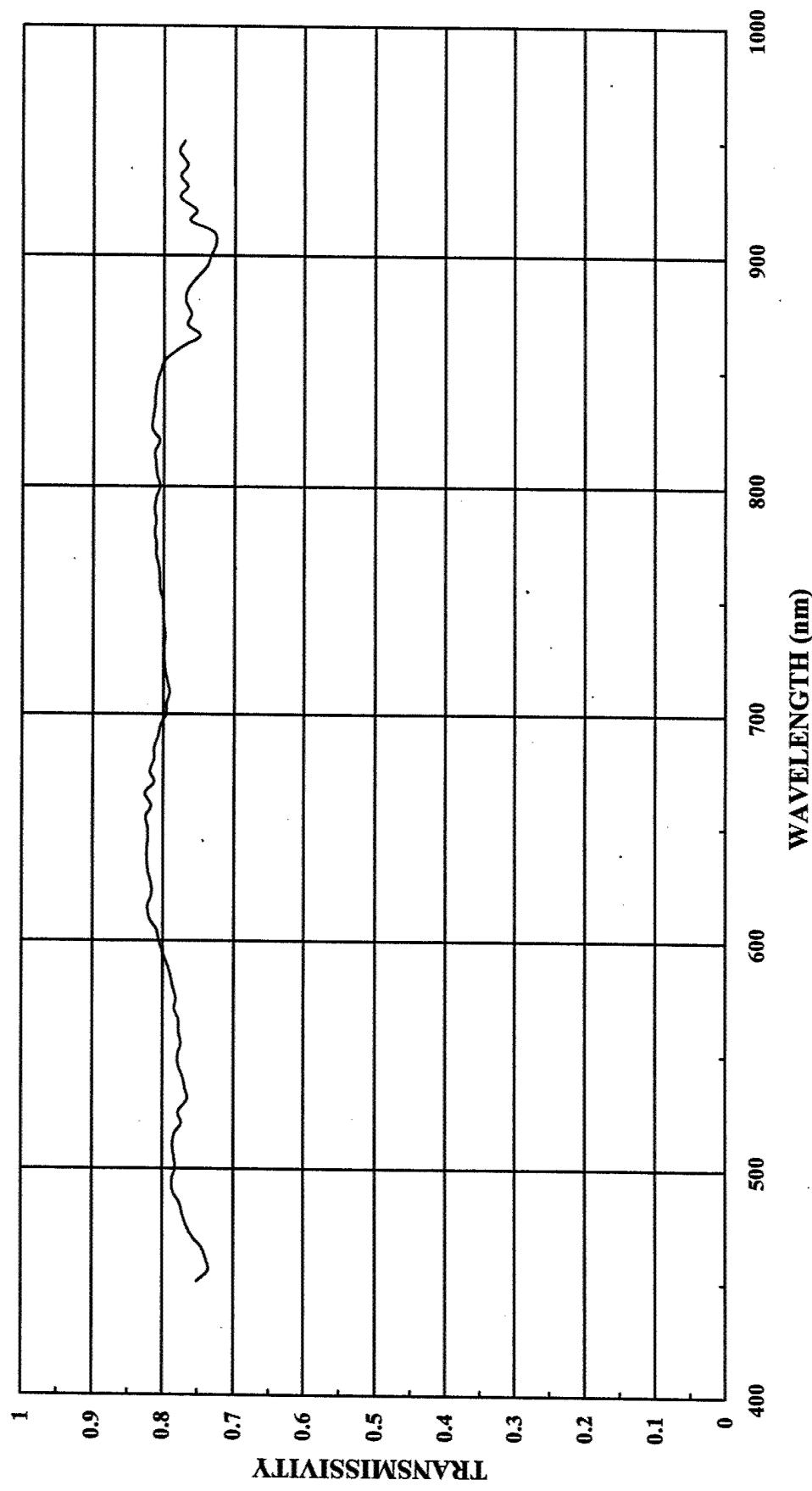
**S/N#** 234

**Material Type:** N/A

**Construction:** N/A

**Coating:** ITO S243 Process Coating

F-18 WINDSCREEN (SIERRACIN, ITO, S243 PROCESS COATING, S/N# 234)  
@ NORMAL  
 $T_{avg} = 80\%$

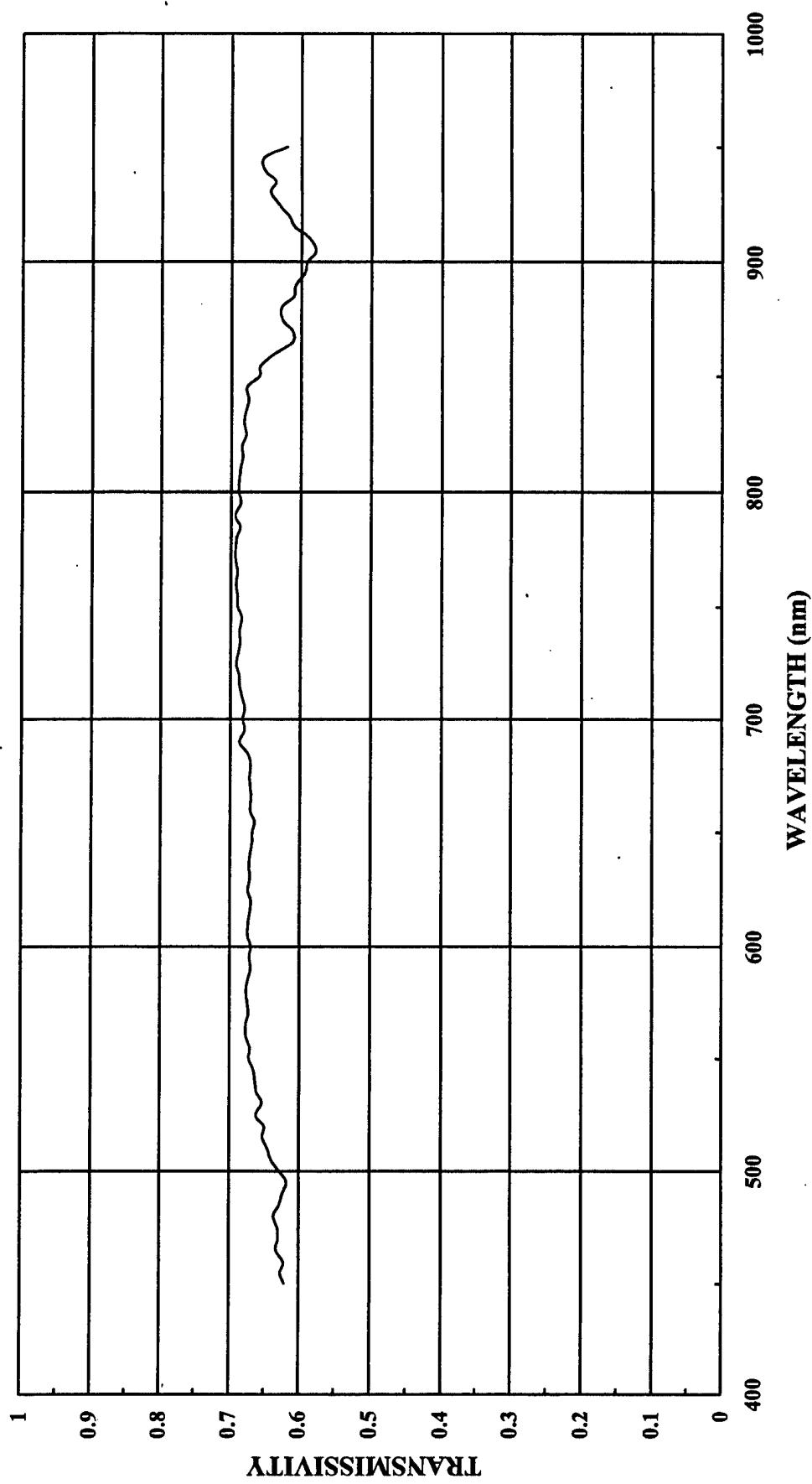


**F-18, SIERRACIN, ITO S243 PROCESS, S/N# 234 @ NORMAL**

WAVELENGTH(nm)	READING	SPECTRA-	RELATIVE	NVG
		RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
		"NVIS A"		RESPONSE
450	0.7511416		0.0001	7.51142E-05
455	0.7350428		0.0001125	8.26923E-05
460	0.738		0.000123	0.000090774
465	0.7442748		0.0001375	0.000102338
470	0.7574627		0.00015	0.000113619
475	0.7655417		0.00016172	0.000123803
480	0.7718696		0.000175	0.000135077
485	0.7759197		0.00019375	0.000150334
490	0.7853736		0.0002125	0.000166892
495	0.7864507		0.00022266	0.000175111
500	0.7819768		0.0002375	0.000185719
505	0.7833089		0.00027656	0.000216632
510	0.7855073		0.0003125	0.000245471
515	0.7831978		0.00034279	0.000268472
520	0.7734668		0.000375	0.00029005
525	0.7780488		0.00041875	0.000325808
530	0.7645601		0.0004625	0.000353609
535	0.7678133		0.00050703	0.000389304
540	0.7709832		0.00055	0.000424041
545	0.7777903		0.00058359	0.000453976
550	0.7783843		0.000625	0.00048649
555	0.7740899		0.0007	0.000541863
560	0.7771967		0.000775	0.000602327
565	0.7775531		0.00085	0.00066092
570	0.7836775		0.000925	0.000724902
575	0.7813998		0.0014525	0.001134983
580	0.7862595		0.00198	0.001556794
585	0.7893738		0.0047175	0.003723871
590	0.7943586		0.0078	0.006195997
595	0.801364		0.0114	0.00913555
600	0.8057785		0.015	0.012086678
605	0.809375		0.026263	0.021256616
610	0.8192		0.052	0.0425984
615	0.8222036		0.088388	0.072672932
620	0.8170213		0.175	0.142978728
625	0.8167808		0.43288	0.353568073
630	0.8220551		0.6138	0.50457742
635	0.8229083		0.67756	0.557569748
640	0.8234363		0.7448	0.613295356
645	0.8217899		0.82458	0.677631516
650	0.8223429		0.8897	0.731638478
655	0.8248457		0.89654	0.739507164
660	0.8174343		0.9034	0.738470147
665	0.8261364		0.91051	0.752205454
670	0.8133333		0.9172	0.745989303
675	0.8190955		0.92241	0.75554188
680	0.8132232		0.9276	0.75434584
685	0.8136557		0.93254	0.758766486
690	0.8083538		0.9379	0.758155029

695	0.8040042	0.9448	0.759623168
700	0.7958214	0.9517	0.757383226
705	0.7959542	0.9586	0.763001696
710	0.7914262	0.9655	0.764121996
715	0.7952942	0.97304	0.773853068
720	0.798158	0.9793	0.781636129
725	0.7989378	0.9802	0.783118832
730	0.7990798	0.9828	0.785335627
735	0.7978227	0.98838	0.788552
740	0.7996782	0.9931	0.79416042
745	0.8004695	0.99719	0.798220181
750	0.8007634	1	0.8007634
755	0.8052239	1	0.8052239
760	0.8055353	1	0.8055353
765	0.8073066	1	0.8073066
770	0.8107914	1	0.8107914
775	0.8103574	0.99814	0.808850135
780	0.8133129	0.9966	0.810547636
785	0.8109413	0.99543	0.807235298
790	0.8130288	0.9945	0.808557142
795	0.8108832	0.9938	0.805855724
800	0.8055556	0.9931	0.799997266
805	0.8097469	0.9862	0.798572393
810	0.8114833	0.9793	0.794685596
815	0.8128079	0.97283	0.790723909
820	0.8063555	0.9655	0.778536235
825	0.816616	0.95515	0.779990772
830	0.815625	0.9448	0.7706025
835	0.8130342	0.93402	0.759390203
840	0.8122222	0.9241	0.750574535
845	0.8102445	0.9172	0.743156255
850	0.804878	0.9103	0.732680443
855	0.798212	0.86334	0.689128348
860	0.7746289	0.8	0.61970312
865	0.7486034	0.72848	0.545342605
870	0.7658321	0.6552	0.501773192
875	0.7608025	0.58016	0.441387178
880	0.7684729	0.5034	0.386849258
885	0.7662566	0.42523	0.325835294
890	0.7550645	0.3448	0.26034624
895	0.7391304	0.25704	0.189986078
900	0.7333333	0.175	0.128333328
905	0.7268817	0.11009	0.080022406
910	0.7295455	0.0621	0.045304776
915	0.7619047	0.043125	0.03285714
920	0.7536946	0.0276	0.020801971
925	0.7769029	0.015525	0.012061418
930	0.7663044	0.0069	0.0052875
935	0.7761627	0	0
940	0.7657658	0	0
945	0.7774193	0	0
950	0.7702703	0	0
<b>SUM:</b>		39.16559062	
<b>T<sub>NVG</sub>(SUM/NVG):</b>		0.804246	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

F-18 WINDSCREEN (SIERRACIN, ITO, S243 PROCESS COATING, S/N# 234)  
@ DESIGN EYE  
 $T_{avg} = 68\%$



**F-18, SIERRACIN, ITO S243 PROCESS, S/N# 234 @ DESIGN EYE**

WAVELENGTH(nm)	<u>SPECTRA- RADIOMETRIC</u>	<u>RELATIVE SPECTRAL SENSITIVITY</u>	<u>NVG SPECTRAL RESPONSE</u>
	READING	"NVIS A"	
450	0.6204545	0.0001	6.20455E-05
455	0.6263269	0.0001125	7.04618E-05
460	0.6217821	0.000123	7.64792E-05
465	0.632381	0.0001375	8.69524E-05
470	0.6294227	0.00015	9.44134E-05
475	0.6300885	0.00016172	0.000101898
480	0.6357388	0.000175	0.000111254
485	0.6277128	0.00019375	0.000121619
490	0.623622	0.0002125	0.00013252
495	0.6175182	0.00022266	0.000137497
500	0.6280753	0.0002375	0.000149168
505	0.639416	0.00027656	0.000176837
510	0.6445087	0.0003125	0.000201409
515	0.6522911	0.00034279	0.000223599
520	0.65	0.000375	0.00024375
525	0.6617647	0.00041875	0.000277114
530	0.6534653	0.0004625	0.000302228
535	0.6609125	0.00050703	0.000335102
540	0.6630952	0.00055	0.000364702
545	0.6659192	0.00058359	0.000388624
550	0.6721133	0.000625	0.000420071
555	0.6705757	0.0007	0.000469403
560	0.676071	0.000775	0.000523955
565	0.6767372	0.00085	0.000575227
570	0.6728335	0.000925	0.000622371
575	0.6743075	0.0014525	0.000979432
580	0.6761905	0.00198	0.001338857
585	0.6739131	0.0047175	0.003179185
590	0.6696915	0.0078	0.005223594
595	0.6717687	0.0114	0.007658163
600	0.669607	0.015	0.010044105
605	0.6739812	0.026263	0.017700768
610	0.6736	0.052	0.0350272
615	0.6708333	0.088388	0.059293614
620	0.6695132	0.175	0.11716481
625	0.6741186	0.43288	0.29181246
630	0.6711186	0.6138	0.411932597
635	0.6726094	0.67756	0.455733225
640	0.671406	0.7448	0.500063189
645	0.6684783	0.82458	0.551213837
650	0.6679597	0.8897	0.594283745
655	0.6648773	0.89654	0.596089095
660	0.6710635	0.9034	0.606238766
665	0.6696833	0.91051	0.609753341
670	0.671141	0.9172	0.615570525
675	0.6722408	0.92241	0.620081636
680	0.6705298	0.9276	0.621983442
685	0.6751773	0.93254	0.629629839
690	0.6871166	0.9379	0.644446659

695	0.679285	0.9448	0.641788468
700	0.6825095	0.9517	0.649544291
705	0.6792619	0.9586	0.651140457
710	0.6832092	0.9655	0.659638483
715	0.6868607	0.97304	0.668342936
720	0.6878347	0.9793	0.673596522
725	0.6920732	0.9802	0.678370151
730	0.6884113	0.9828	0.676570626
735	0.6863813	0.98838	0.678405549
740	0.6873489	0.9931	0.682606193
745	0.6838408	0.99719	0.681919207
750	0.6899999	1	0.6899999
755	0.6900672	1	0.6900672
760	0.6929249	1	0.6929249
765	0.6903735	1	0.6903735
770	0.6933045	1	0.6933045
775	0.6940572	0.99814	0.692766254
780	0.6921899	0.9966	0.689836454
785	0.6870475	0.99543	0.683907693
790	0.6943268	0.9945	0.690508003
795	0.6864482	0.9938	0.682192221
800	0.6895273	0.9931	0.684769562
805	0.6889098	0.9862	0.679402845
810	0.6866667	0.9793	0.672452699
815	0.6834319	0.97283	0.664863055
820	0.6846847	0.9655	0.661063078
825	0.6788247	0.95515	0.648379412
830	0.6816284	0.9448	0.644002512
835	0.6791846	0.93402	0.634372
840	0.6748329	0.9241	0.623613083
845	0.6776084	0.9172	0.621502424
850	0.6597561	0.9103	0.600575978
855	0.6581632	0.86334	0.568218617
860	0.6361186	0.8	0.50889488
865	0.612447	0.72848	0.446155391
870	0.6126657	0.6552	0.401418567
875	0.6263565	0.58016	0.363386987
880	0.6282895	0.5034	0.316280934
885	0.6111111	0.42523	0.259862773
890	0.6085343	0.3448	0.209822627
895	0.5952381	0.25704	0.153000001
900	0.5916667	0.175	0.103541673
905	0.5797414	0.11009	0.063823731
910	0.5890412	0.0621	0.036579459
915	0.6099291	0.043125	0.026303192
920	0.617866	0.0276	0.017053102
925	0.631579	0.015525	0.009805264
930	0.6444445	0.0069	0.004446667
935	0.6368877	0	0
940	0.6526946	0	0
945	0.6537217	0	0
950	0.62	0	0
<b>SUM:</b>		32.8741048	
<b>Tnvg(SUM/NVG):</b>		0.675053455	<b>(SPECTRAL</b>
			<b>TRANSMISSION</b>
			<b>COEFFICIENT)</b>

# **F-18**

**Aircraft:** F-18

**Part Name:** Windscreen, SIERRACIN

**Manufactured:** N/A

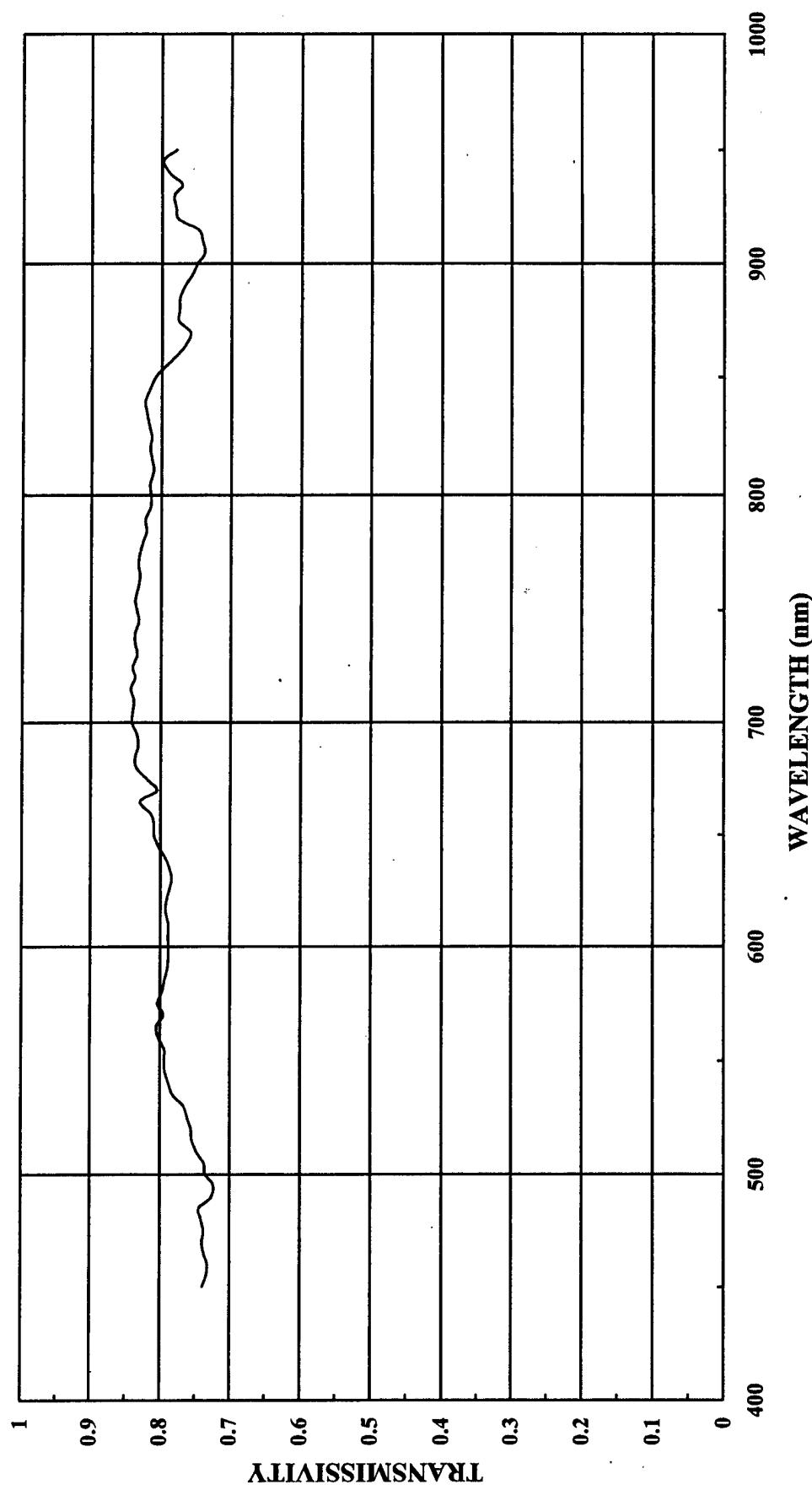
**S/N#** 307

**Material Type:** N/A

**Construction:** N/A

**Coating:** ITO S243 Process Coating

F-18 WINDSCREEN (SIERRACIN, ITO, S243 PROCESS COATING, S/N#307)  
@ NORMAL  
 $T_{avg} = 82\%$

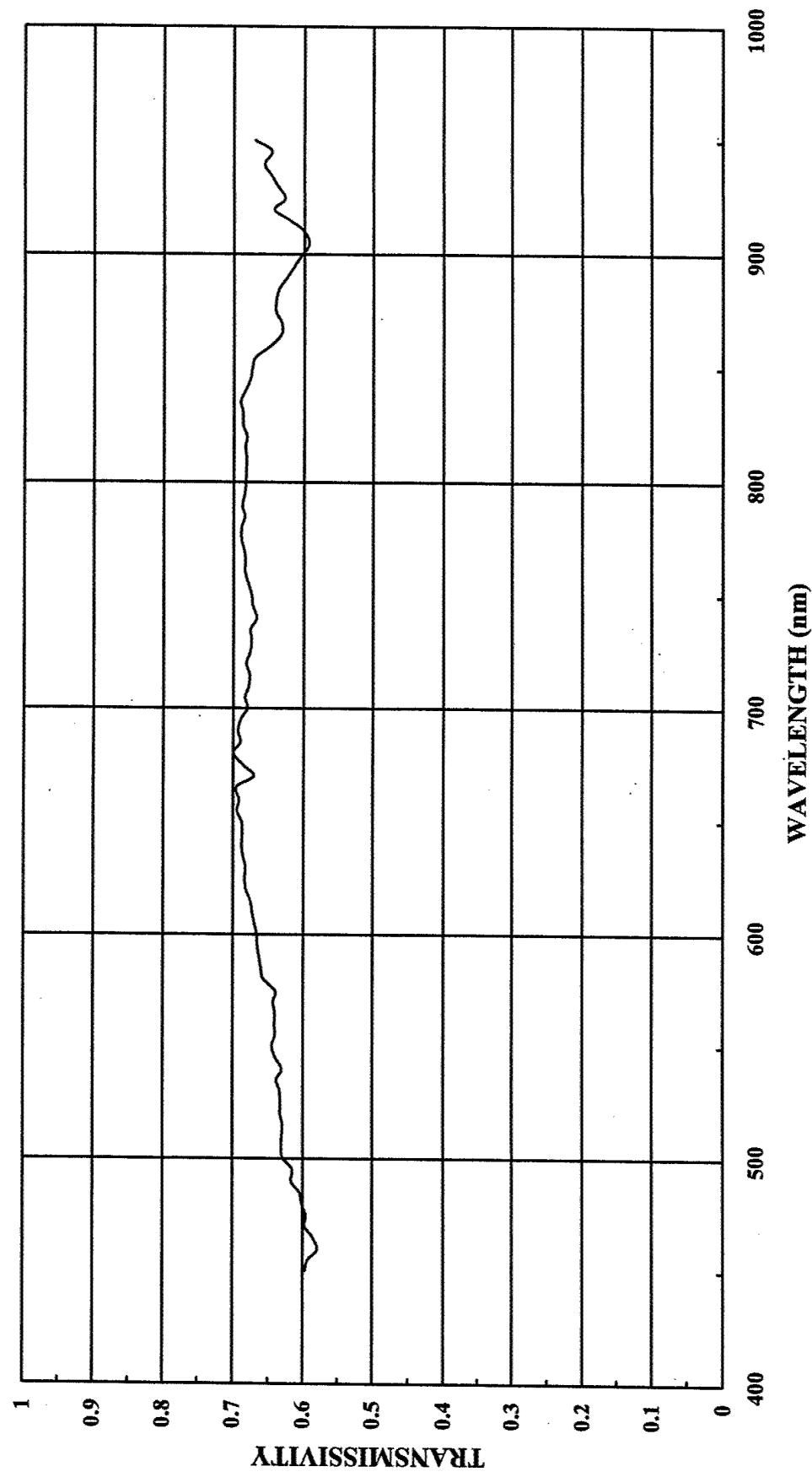


**F-18, SIERRACIN, ITO S243 PROCESS, S/N# 307 @ NORMAL**

WAVELENGTH(nm)	READING	SPECTRA-	RELATIVE	NVG
		RADIOMETRIC	SPECTRAL SENSITIVITY "NVIS A"	SPECTRAL RESPONSE
450	0.7393259		0.0001	7.39326E-05
455	0.7334755		0.0001125	8.2516E-05
460	0.7317554		0.000123	9.00059E-05
465	0.7372401		0.0001375	0.000101371
470	0.739777		0.00015	0.000110967
475	0.7375886		0.00016172	0.000119283
480	0.7414966		0.000175	0.000129762
485	0.7441471		0.00019375	0.000144179
490	0.7268445		0.0002125	0.000154454
495	0.7236843		0.00022266	0.000161136
500	0.7350801		0.0002375	0.000174582
505	0.7365357		0.00027656	0.000203696
510	0.7467626		0.0003125	0.000233363
515	0.7543623		0.00034279	0.000258588
520	0.7556109		0.000375	0.000283354
525	0.7603912		0.00041875	0.000318414
530	0.7666667		0.0004625	0.000354583
535	0.7814815		0.00050703	0.000396235
540	0.7875895		0.00055	0.000433174
545	0.7932584		0.00058359	0.000462938
550	0.7947883		0.000625	0.000496743
555	0.7940552		0.0007	0.000555839
560	0.8033126		0.000775	0.000622567
565	0.805668		0.00085	0.000684818
570	0.7956989		0.000925	0.000736021
575	0.8038461		0.0014525	0.001167586
580	0.7975167		0.00198	0.001579083
585	0.7943396		0.0047175	0.003747297
590	0.7907188		0.0078	0.006167607
595	0.7886248		0.0114	0.008990323
600	0.7888		0.015	0.011832
605	0.7889407		0.026263	0.02071995
610	0.7887212		0.052	0.041013502
615	0.7925311		0.088388	0.070050239
620	0.7921636		0.175	0.13862863
625	0.7883462		0.43288	0.341259303
630	0.7843463		0.6138	0.481431759
635	0.7876823		0.67756	0.533702019
640	0.7933754		0.7448	0.590905998
645	0.803876		0.82458	0.662860072
650	0.8095975		0.8897	0.720298896
655	0.80967		0.89654	0.725901542
660	0.8137818		0.9034	0.735170478
665	0.8291855		0.91051	0.75498169
670	0.8053691		0.9172	0.738684539
675	0.8186356		0.92241	0.755117664
680	0.8349835		0.9276	0.774530695
685	0.8364154		0.93254	0.779990817
690	0.8323134		0.9379	0.780626738
695	0.8345627		0.9448	0.788494839

700	0.8412548	0.9517	0.800622193
705	0.8402107	0.9586	0.805425977
710	0.8385502	0.9655	0.809620218
715	0.8430141	0.97304	0.82028644
720	0.8368903	0.9793	0.819566671
725	0.8401515	0.9802	0.8235165
730	0.8339709	0.9828	0.819626601
735	0.836703	0.98838	0.826980511
740	0.8370968	0.9931	0.831320832
745	0.8318999	0.99719	0.829562261
750	0.8347297	1	0.8347297
755	0.8368108	1	0.8368108
760	0.8327273	1	0.8327273
765	0.8304721	1	0.8304721
770	0.832615	1	0.832615
775	0.8310168	0.99814	0.829471109
780	0.826087	0.9966	0.823278304
785	0.8211707	0.99543	0.81741795
790	0.823181	0.9945	0.818653505
795	0.8154392	0.9938	0.810383477
800	0.8154981	0.9931	0.809871163
805	0.8164794	0.9862	0.805211984
810	0.8116634	0.9793	0.794861968
815	0.8139764	0.97283	0.791860661
820	0.8167331	0.9655	0.788555808
825	0.8141414	0.95515	0.777627158
830	0.8184648	0.9448	0.773285543
835	0.8216972	0.93402	0.767481619
840	0.8234637	0.9241	0.760962805
845	0.8161592	0.9172	0.748581218
850	0.8087698	0.9103	0.736223149
855	0.7944162	0.86334	0.685851282
860	0.7761394	0.8	0.62091152
865	0.7640449	0.72848	0.556591429
870	0.7594752	0.6552	0.497608151
875	0.7758888	0.58016	0.450139646
880	0.775041	0.5034	0.390155639
885	0.7748691	0.42523	0.329497587
890	0.7685185	0.3448	0.264985179
895	0.756487	0.25704	0.194447418
900	0.7494824	0.175	0.13115942
905	0.7392241	0.11009	0.081381181
910	0.7425967	0.0621	0.046115255
915	0.7482353	0.043125	0.032267647
920	0.7766749	0.0276	0.021436227
925	0.7803618	0.015525	0.012115117
930	0.782967	0.0069	0.005402472
935	0.7714286	0	0
940	0.7886904	0	0
945	0.7980769	0	0
950	0.7792643	0	0
<b>SUM:</b>		39.80291148	
<b>Tnvg(SUM/NVG):</b>		0.817333068	(SPECTRAL TRANSMISSION COEFFICIENT)

F-18 WINDSCREEN (SIERRACIN, ITO, S243 PROCESS COATING, S/N# 307)  
@ DESIGN EYE  
Trvg = 68%



F-18, SIERRACIN, ITO S243 PROCESS, S/N# 307 @ DESIGN EYE			
	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
WAVELENGTH(nm)	READING	"NVIS A"	
450	0.596882	0.0001	5.96882E-05
455	0.5929019	0.0001125	6.67015E-05
460	0.5791506	0.000123	7.12355E-05
465	0.5862709	0.0001375	8.06122E-05
470	0.5978062	0.00015	8.96709E-05
475	0.5951558	0.00016172	9.62486E-05
480	0.6016667	0.000175	0.000105292
485	0.6048781	0.00019375	0.000117195
490	0.6165644	0.0002125	0.00013102
495	0.6157143	0.00022266	0.000137095
500	0.629055	0.0002375	0.000149401
505	0.6309013	0.00027656	0.000174482
510	0.630618	0.0003125	0.000197068
515	0.6293888	0.00034279	0.000215748
520	0.6329268	0.000375	0.000237348
525	0.6324582	0.00041875	0.000264842
530	0.6334134	0.0004625	0.000292954
535	0.6382211	0.00050703	0.000323597
540	0.6309662	0.00055	0.000347031
545	0.6403509	0.00058359	0.000373702
550	0.6447508	0.000625	0.000402969
555	0.6403326	0.0007	0.000448233
560	0.6408952	0.000775	0.000496694
565	0.6403941	0.00085	0.000544335
570	0.6431298	0.000925	0.000594895
575	0.6395891	0.0014525	0.000929003
580	0.6573557	0.00198	0.001301564
585	0.6602032	0.0047175	0.003114509
590	0.6628217	0.0078	0.005170009
595	0.6655629	0.0114	0.007587417
600	0.6664056	0.015	0.009996084
605	0.6697248	0.026263	0.017588982
610	0.6728827	0.052	0.0349899
615	0.6761363	0.088388	0.059762335
620	0.6822352	0.175	0.11939116
625	0.6837248	0.43288	0.295970791
630	0.6829268	0.6138	0.41918047
635	0.686166	0.67756	0.464918635
640	0.6877898	0.7448	0.512265843
645	0.686884	0.82458	0.566390809
650	0.688351	0.8897	0.612425885
655	0.6945071	0.89654	0.622653395
660	0.6918138	0.9034	0.624984587
665	0.6955556	0.91051	0.633310329
670	0.6710526	0.9172	0.615489445
675	0.6855754	0.92241	0.632381605
680	0.7001621	0.9276	0.649470364
685	0.6897507	0.93254	0.643220118
690	0.6934132	0.9379	0.65035224

695	0.6893705	0.9448	0.651317248
700	0.6802595	0.9517	0.647402966
705	0.6838933	0.9586	0.655580117
710	0.6788025	0.9655	0.655383814
715	0.6776669	0.97304	0.659397
720	0.6821241	0.9793	0.668004131
725	0.6765579	0.9802	0.663162054
730	0.6746626	0.9828	0.663058403
735	0.6760886	0.98838	0.66823245
740	0.667451	0.9931	0.662845588
745	0.6730329	0.99719	0.671141678
750	0.6746269	1	0.6746269
755	0.6785714	1	0.6785714
760	0.6839858	1	0.6839858
765	0.6835443	1	0.6835443
770	0.6851722	1	0.6851722
775	0.6888888	0.99814	0.687607467
780	0.6889055	0.9966	0.686563221
785	0.684252	0.99543	0.681124968
790	0.6879139	0.9945	0.684130374
795	0.6843941	0.9938	0.680150857
800	0.6832579	0.9931	0.67854342
805	0.6822774	0.9862	0.672861972
810	0.682243	0.9793	0.66812057
815	0.684058	0.97283	0.665472144
820	0.6815969	0.9655	0.658081807
825	0.6868787	0.95515	0.65607219
830	0.687054	0.9448	0.649128619
835	0.6906019	0.93402	0.645035987
840	0.6844397	0.9241	0.632490727
845	0.6765715	0.9172	0.62055138
850	0.6742243	0.9103	0.61374638
855	0.6691729	0.86334	0.577723731
860	0.6459709	0.8	0.51677672
865	0.6325967	0.72848	0.460834044
870	0.632948	0.6552	0.41470753
875	0.6404834	0.58016	0.371582849
880	0.6404494	0.5034	0.322402228
885	0.6363636	0.42523	0.270600894
890	0.6254546	0.3448	0.215656746
895	0.6131528	0.25704	0.157604796
900	0.602459	0.175	0.105430325
905	0.5932204	0.11009	0.065307634
910	0.6013513	0.0621	0.037343916
915	0.6220657	0.043125	0.026826583
920	0.6430318	0.0276	0.017747678
925	0.6282052	0.015525	0.009752886
930	0.638587	0.0069	0.00440625
935	0.6477273	0	0
940	0.6567164	0	0
945	0.6466877	0	0
950	0.67	0	0
<b>SUM:</b>		33.03467648	
<b>Tnvg(SUM/NVG):</b>		0.678350715	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **F-18**

**Aircraft:** F-18

**Part Name:** Windscreen, SWEDLOW

**Manufactured:** N/A

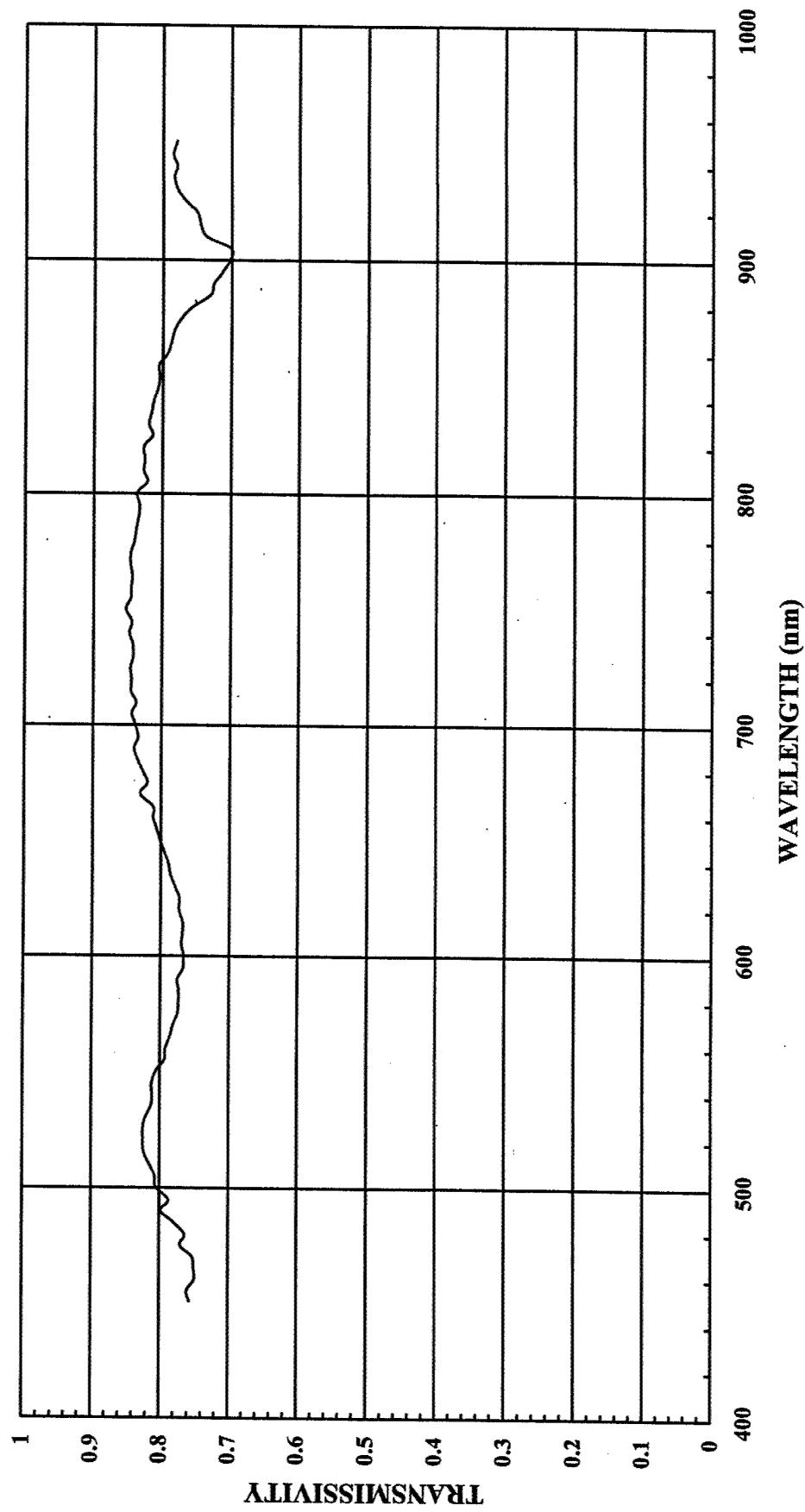
**S/N#** 126

**Material Type:** N/A

**Construction:** N/A

**Coating:** Night Attack Acrylic

F-18 WINDSCREEN (SWEDLOW, NIGHT ATTACK ACRYLIC, S/N# 126)  
@ NORMAL  
 $T_{avg} = 82\%$

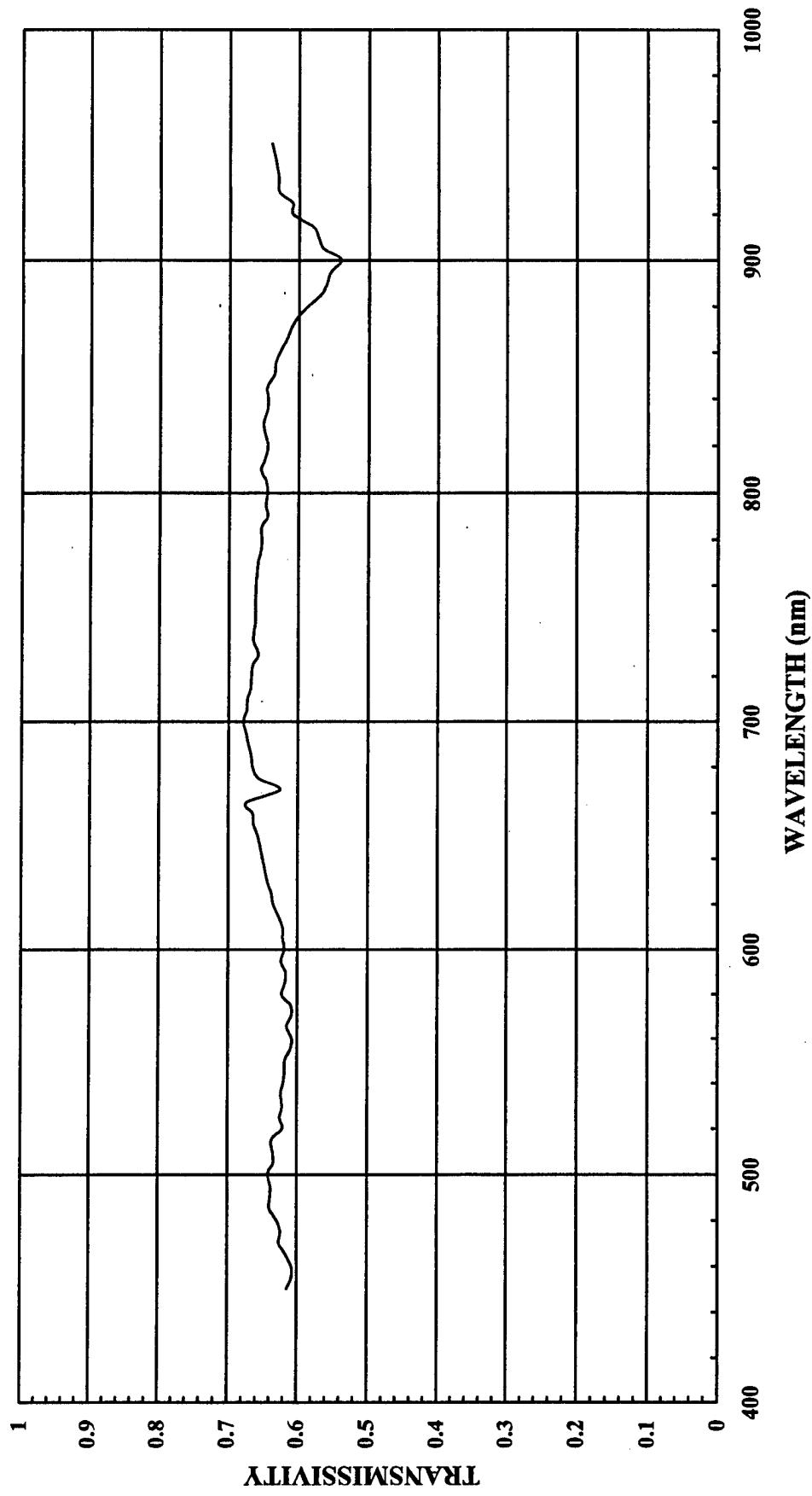


**F-18, SWEDLOW, NIGHT ATTACK ACRYLIC, S/N# 126 @ NORMAL**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
	READING	"NVIS A"	RESPONSE
450	0.7566137	0.0001	7.56614E-05
455	0.7604938	0.0001125	8.55556E-05
460	0.75	0.000123	0.00009225
465	0.7505471	0.0001375	0.0001032
470	0.7531915	0.00015	0.000112979
475	0.7703252	0.00016172	0.000124577
480	0.7637795	0.000175	0.000133661
485	0.7807692	0.00019375	0.000151274
490	0.7985612	0.0002125	0.000169694
495	0.7872697	0.0002266	0.000175293
500	0.8052805	0.0002375	0.000191254
505	0.8066667	0.00027656	0.000223092
510	0.81445	0.0003125	0.000254516
515	0.8231707	0.00034279	0.000282175
520	0.8243626	0.000375	0.000309136
525	0.8248276	0.00041875	0.000345397
530	0.8217271	0.0004625	0.000380049
535	0.8131101	0.00050703	0.000412271
540	0.811245	0.00055	0.000446185
545	0.8122606	0.00058359	0.000474027
550	0.8054187	0.000625	0.000503387
555	0.793765	0.0007	0.000555636
560	0.7924529	0.000775	0.000614151
565	0.785877	0.00085	0.000667995
570	0.7817982	0.000925	0.000723163
575	0.7754881	0.0014525	0.001126396
580	0.7738478	0.00198	0.001532219
585	0.7738853	0.0047175	0.003650804
590	0.7756147	0.0078	0.006049795
595	0.7673078	0.0114	0.008747309
600	0.767148	0.015	0.01150722
605	0.7696382	0.026263	0.020213008
610	0.7686833	0.052	0.039971532
615	0.7682363	0.088388	0.06790287
620	0.773855	0.175	0.135424625
625	0.7729885	0.43288	0.334611262
630	0.7789276	0.6138	0.478105761
635	0.7864864	0.67756	0.532891725
640	0.7893357	0.7448	0.587897229
645	0.7949827	0.82458	0.655526835
650	0.8017316	0.8897	0.713300605
655	0.8064791	0.89654	0.723040772
660	0.8114754	0.9034	0.733086876
665	0.8111824	0.91051	0.738589687
670	0.8301887	0.9172	0.761449076
675	0.82	0.92241	0.7563762
680	0.8260869	0.9276	0.766278208

685	0.834891	0.93254	0.778569253
690	0.8395722	0.9379	0.787434766
695	0.8337264	0.9448	0.787704703
700	0.8382046	0.9517	0.797719318
705	0.8433269	0.9586	0.808413166
710	0.8369566	0.9655	0.808081597
715	0.8444831	0.97304	0.821715836
720	0.8442761	0.9793	0.826799585
725	0.8458962	0.9802	0.829147455
730	0.8416596	0.9828	0.827183055
735	0.8426871	0.98838	0.832895076
740	0.847308	0.9931	0.841461575
745	0.84375	0.99719	0.841379063
750	0.852349	1	0.852349
755	0.8451508	1	0.8451508
760	0.8448687	1	0.8448687
765	0.8435054	1	0.8435054
770	0.8461539	1	0.8461539
775	0.8456001	0.99814	0.844027284
780	0.8405316	0.9966	0.837673793
785	0.8375768	0.99543	0.833749074
790	0.8345656	0.9945	0.829975489
795	0.8330116	0.9938	0.827846928
800	0.8363636	0.9931	0.830592691
805	0.8217214	0.9862	0.810381645
810	0.8271983	0.9793	0.810075295
815	0.8255319	0.97283	0.803102198
820	0.8268399	0.9655	0.798313923
825	0.8144105	0.95515	0.777884189
830	0.8199105	0.9448	0.77465144
835	0.8157589	0.93402	0.761935128
840	0.813253	0.9241	0.751527097
845	0.8070176	0.9172	0.740196543
850	0.8042049	0.9103	0.73206772
855	0.8054794	0.86334	0.695402585
860	0.7936963	0.8	0.63495704
865	0.7886056	0.72848	0.574483407
870	0.7832279	0.6552	0.51317092
875	0.7737104	0.58016	0.448875826
880	0.7592267	0.5034	0.382194721
885	0.7306968	0.42523	0.3107142
890	0.7263581	0.3448	0.250448273
895	0.7142857	0.25704	0.183599996
900	0.7017938	0.175	0.122813915
905	0.7013889	0.11009	0.077215904
910	0.736715	0.0621	0.045750002
915	0.7455919	0.043125	0.032153651
920	0.7506562	0.0276	0.020718111
925	0.7666667	0.015525	0.011902501
930	0.7790698	0.0069	0.005375582
935	0.7835366	0	0
940	0.7795527	0	0
945	0.7852349	0	0
950	0.7797834	0	0
<b>SUM:</b>		39.97919591	
<b>Tnvg(SUM/NVG):</b>		0.820952981	(SPECTRAL TRANSMISSION COEFFICIENT)

F-18 WINDSCREEN (SWEDLOW, NIGHT ATTACK ACRYLIC, S/N# 126)  
@ DESIGN EYE  
 $T_{avg} = 65\%$



**F-18, SWEDLOW, NIGHT ATTACK ACRYLIC, S/N# 126 @ DESIGN EYE**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
	READING	"NVIS A"	RESPONSE
450	0.6149732	0.0001	6.14973E-05
455	0.6078431	0.0001125	6.83823E-05
460	0.6074766	0.000123	7.47196E-05
465	0.616408	0.0001375	8.47561E-05
470	0.6263499	0.00015	9.39525E-05
475	0.6239669	0.00016172	0.000100908
480	0.6284585	0.000175	0.00010998
485	0.6398468	0.00019375	0.00012397
490	0.6389892	0.0002125	0.000135785
495	0.6383702	0.00022266	0.00014214
500	0.6421404	0.0002375	0.000152508
505	0.6342282	0.00027656	0.000175402
510	0.6351576	0.0003125	0.000198487
515	0.6365031	0.00034279	0.000218187
520	0.6210826	0.000375	0.000232906
525	0.6251729	0.00041875	0.000261791
530	0.6216596	0.0004625	0.000287518
535	0.6239437	0.00050703	0.000316358
540	0.6202703	0.00055	0.000341149
545	0.6185567	0.00058359	0.000360984
550	0.6180469	0.000625	0.000386279
555	0.6101695	0.0007	0.000427119
560	0.608076	0.000775	0.000471259
565	0.6153846	0.00085	0.000523077
570	0.6092715	0.000925	0.000563576
575	0.6095445	0.0014525	0.000885363
580	0.6225596	0.00198	0.001232668
585	0.6181818	0.0047175	0.002916273
590	0.6170431	0.0078	0.004812936
595	0.6236664	0.0114	0.007109797
600	0.619349	0.015	0.009290235
605	0.6214539	0.026263	0.016321244
610	0.6215246	0.052	0.032319279
615	0.6273234	0.088388	0.055447861
620	0.6353167	0.175	0.111180423
625	0.6383799	0.43288	0.276341891
630	0.6437323	0.6138	0.395122886
635	0.6479129	0.67756	0.438999865
640	0.6511424	0.7448	0.48497086
645	0.6541812	0.82458	0.539424734
650	0.6582389	0.8897	0.585635149
655	0.6643894	0.89654	0.595651673
660	0.6654446	0.9034	0.601162652
665	0.6746765	0.91051	0.6142997
670	0.6257669	0.9172	0.573953401
675	0.6563636	0.92241	0.605436348

680	0.6655462	0.9276	0.617360655
685	0.668239	0.93254	0.623159597
690	0.6720214	0.9379	0.630288871
695	0.675	0.9448	0.63774
700	0.6792849	0.9517	0.646475439
705	0.6744639	0.9586	0.646541095
710	0.6733577	0.9655	0.650126859
715	0.6687117	0.97304	0.650683233
720	0.6677966	0.9793	0.65397321
725	0.6661046	0.9802	0.652915729
730	0.6581849	0.9828	0.64686412
735	0.6649573	0.98838	0.657230496
740	0.6642984	0.9931	0.659714741
745	0.6622807	0.99719	0.660419691
750	0.6619128	1	0.6619128
760	0.6613291	1	0.6613291
765	0.6603475	1	0.6603475
770	0.658805	1	0.658805
775	0.6548672	1	0.6548672
780	0.6527894	0.99814	0.651575212
785	0.6542882	0.9966	0.65206362
790	0.6447734	0.99543	0.641826786
795	0.6478599	0.9945	0.644296671
800	0.6453901	0.9938	0.641388681
805	0.647482	0.9931	0.643014374
810	0.6549948	0.9862	0.645955872
815	0.6491979	0.9793	0.635759503
820	0.6453362	0.97283	0.627802415
825	0.6490067	0.9655	0.626615969
830	0.6515837	0.95515	0.622360171
835	0.646028	0.9448	0.610367254
840	0.6447689	0.93402	0.602227048
845	0.6464647	0.9241	0.597398029
850	0.6357616	0.9172	0.58312054
855	0.634349	0.9103	0.577447895
860	0.628447	0.86334	0.542563433
865	0.6183206	0.8	0.49465648
870	0.6121795	0.72848	0.445960522
875	0.6030151	0.6552	0.395095494
880	0.5888502	0.58016	0.341627332
885	0.5687382	0.5034	0.28630281
890	0.5604839	0.42523	0.238334569
895	0.5555555	0.3448	0.191555536
900	0.5405406	0.25704	0.138940556
905	0.5651162	0.175	0.098895335
910	0.5724638	0.11009	0.06302254
915	0.5801527	0.0621	0.036027483
920	0.6096257	0.043125	0.026290108
925	0.6100278	0.0276	0.016836767
930	0.6290801	0.015525	0.009766469
935	0.6296296	0.0069	0.004344444
940	0.6322581	0	0
945	0.6351351	0	0
950	0.6397058	0	0
		0	0
<b>SUM:</b>		31.62262318	
<b>T<sub>Nvg</sub>(SUM/NVG):</b>		0.6493549	(SPECTRAL
			TRANSMISSION
			COEFFICIENT)

# **F-18**

**Aircraft:** F-18

**Part Name:** Windscreen, SWEDLOW

**Manufactured:** N/A

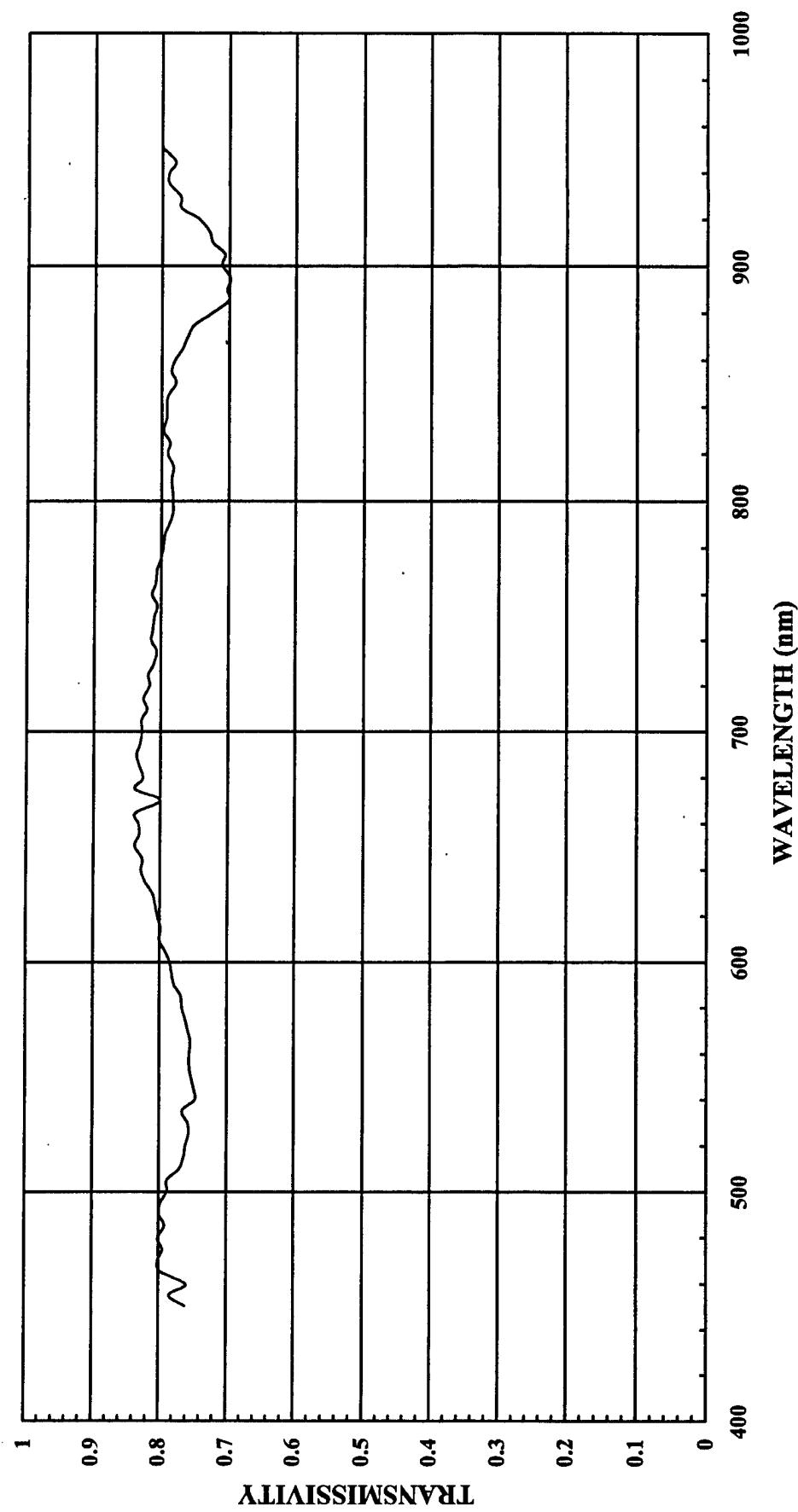
**S/N#** 077

**Material Type:** N/A

**Construction:** N/A

**Coating:** Night Attack Acrylic

F-18 WINDSCREEN (SWEDLOW, NIGHT ATTACK ACRYLIC, S/N#077)  
@ NORMAL  
 $T_{\text{avg}} = 80\%$

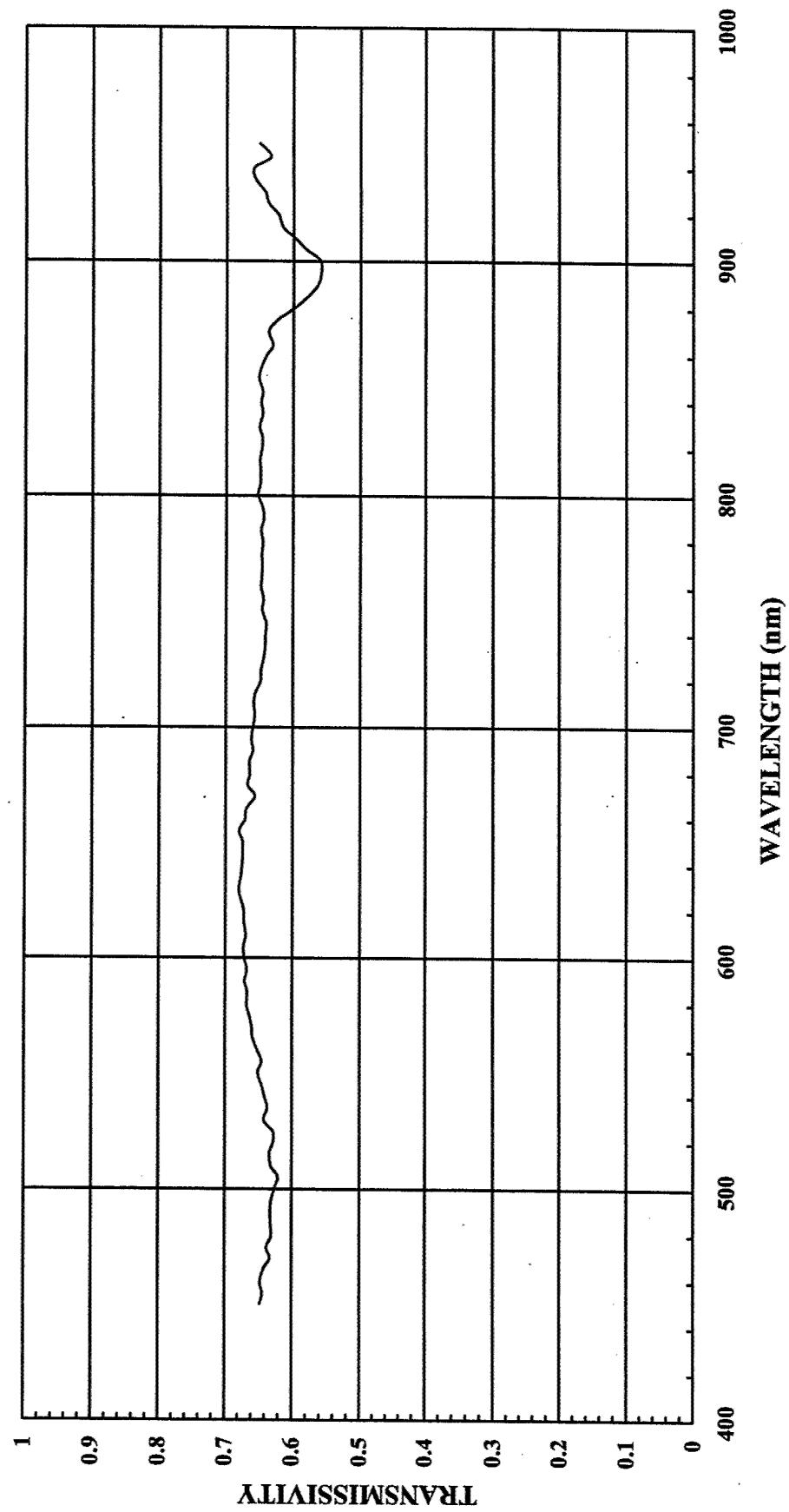


**F-18, SWEDLOW, NIGHT ATTACK ACRYLIC, S/N# 077 @ NORMAL**

WAVELENGTH(nm)	READING	SPECTRA-	RELATIVE	NVG
		RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
		"NVIS A"		RESPONSE
450	0.7605264		0.0001	7.60526E-05
455	0.7846535		0.0001125	8.82735E-05
460	0.759009		0.000123	9.33581E-05
465	0.7978022		0.0001375	0.000109698
470	0.801282		0.00015	0.000120192
475	0.7942973		0.00016172	0.000128454
480	0.8011811		0.000175	0.000140207
485	0.7916666		0.00019375	0.000153385
490	0.7992831		0.0002125	0.000169848
495	0.7979798		0.00022266	0.000177678
500	0.7880794		0.0002375	0.000187169
505	0.78798		0.00027656	0.000217924
510	0.7703583		0.0003125	0.000240737
515	0.7628399		0.00034279	0.000261494
520	0.7606232		0.000375	0.000285234
525	0.7561644		0.00041875	0.000316644
530	0.7569832		0.0004625	0.000350105
535	0.7657784		0.00050703	0.000388273
540	0.7469879		0.00055	0.000410843
545	0.7487245		0.00058359	0.000436948
550	0.7530712		0.000625	0.00047067
555	0.7553957		0.0007	0.000528777
560	0.7555817		0.000775	0.000585576
565	0.7539682		0.00085	0.000640873
570	0.7576754		0.000925	0.00070085
575	0.7615467		0.0014525	0.001106147
580	0.7663451		0.00198	0.001517363
585	0.7680085		0.0047175	0.00362308
590	0.7781186		0.0078	0.006069325
595	0.7817308		0.0114	0.008911731
600	0.7854578		0.015	0.011781867
605	0.7922875		0.026263	0.020807847
610	0.8007149		0.052	0.041637175
615	0.7985213		0.08388	0.070579701
620	0.8034351		0.175	0.140601143
625	0.8072519		0.43288	0.349443202
630	0.8112149		0.6138	0.497923706
635	0.8234234		0.67756	0.557918759
640	0.8290973		0.7448	0.617511669
645	0.8268734		0.82458	0.681823268
650	0.8383752		0.8897	0.745902415
655	0.8323455		0.89654	0.746231035
660	0.8330308		0.9034	0.752560025
665	0.8379121		0.91051	0.762927346
670	0.8		0.9172	0.73376
675	0.8382353		0.92241	0.773196623
680	0.8266667		0.9276	0.766816031

685	0.8322981	0.93254	0.77615127
690	0.8364611	0.9379	0.784516866
695	0.8311688	0.9448	0.785288282
700	0.8283039	0.9517	0.788296822
705	0.8289855	0.9586	0.7946655
710	0.8204896	0.9655	0.792182709
715	0.826087	0.97304	0.803815694
720	0.8171141	0.9793	0.800199838
725	0.8190955	0.9802	0.802877409
730	0.8111298	0.9828	0.797178367
735	0.8069433	0.98838	0.797566619
740	0.8148149	0.9931	0.809192677
745	0.8128808	0.99719	0.810596605
750	0.8105175	1	0.8105175
755	0.8055329	1	0.8055329
760	0.813749	1	0.813749
765	0.8082942	1	0.8082942
770	0.8068804	1	0.8068804
775	0.801277	0.99814	0.799786625
780	0.7976783	0.9966	0.794966194
785	0.7952756	0.99543	0.791641191
790	0.7887454	0.9945	0.7844073
795	0.7834457	0.9938	0.778588337
800	0.783	0.9931	0.7775973
805	0.7840328	0.9862	0.773213147
810	0.7846939	0.9793	0.768450736
815	0.7826087	0.97283	0.761345222
820	0.7913513	0.9655	0.76404968
825	0.7876787	0.95515	0.75235131
830	0.7970852	0.9448	0.753086097
835	0.7930233	0.93402	0.740699623
840	0.7922705	0.9241	0.732137169
845	0.7907268	0.9172	0.725254621
850	0.7789474	0.9103	0.709075818
855	0.7857143	0.86334	0.678338584
860	0.7804878	0.8	0.62439024
865	0.7699248	0.72848	0.560874818
870	0.7611465	0.6552	0.498703187
875	0.7516556	0.58016	0.436080513
880	0.7264808	0.5034	0.365710435
885	0.7011278	0.42523	0.298140574
890	0.7031873	0.3448	0.242458981
895	0.6985138	0.25704	0.179545987
900	0.7107624	0.175	0.12438342
905	0.7069767	0.11009	0.077831065
910	0.7243902	0.0621	0.044984631
915	0.729798	0.043125	0.031472539
920	0.7453581	0.0276	0.020571884
925	0.7715877	0.015525	0.011978899
930	0.7725947	0.0069	0.005330903
935	0.7896342	0	0
940	0.7898089	0	0
945	0.78	0	0
950	0.7992701	0	0
<b>SUM:</b>		39.09487841	
<b>T<sub>nvg</sub>(SUM/NVG):</b>		0.802793959	(SPECTRAL TRANSMISSION COEFFICIENT)

F-18 WINDSCREEN (SWEDLOW, NIGHT ATTACK ACRYLIC, S/N# 077)  
@ DESIGN EYE  
 $T_{avg} = 65\%$



**F-18, SWEDLOW, NIGHT ATTACK ACRYLIC, S/N# 077 @ DESIGN FYE**

WAVELENGTH(nm)	READING	SPECTRA-	RELATIVE	NVG
		RADIOMETRIC	SPECTRAL SENSITIVITY "NVIS A"	SPECTRAL RESPONSE
450	0.6472148		0.0001	6.47215E-05
455	0.6433915		0.0001125	7.23815E-05
460	0.6465116		0.000123	7.95209E-05
465	0.6415929		0.0001375	8.8219E-05
470	0.6322581		0.00015	9.48387E-05
475	0.6372951		0.00016172	0.000103063
480	0.6302187		0.000175	0.000110288
485	0.6309751		0.00019375	0.000122251
490	0.631295		0.0002125	0.00013415
495	0.6306913		0.0002266	0.00014043
500	0.6252073		0.0002375	0.000148487
505	0.6204013		0.00027656	0.000171578
510	0.6306157		0.0003125	0.000197067
515	0.6330275		0.00034279	0.000216995
520	0.6278409		0.000375	0.00023544
525	0.6277778		0.00041875	0.000262882
530	0.6413502		0.0004625	0.000296624
535	0.636236		0.00050703	0.000322591
540	0.6405405		0.00055	0.000352297
545	0.6444159		0.00058359	0.000376075
550	0.6505576		0.000625	0.000406599
555	0.645006		0.0007	0.000451504
560	0.6509434		0.000775	0.000504481
565	0.6583144		0.00085	0.000559567
570	0.6596686		0.000925	0.000610193
575	0.6630435		0.0014525	0.000963071
580	0.6673843		0.00198	0.001321421
585	0.6666666		0.0047175	0.003145
590	0.6707693		0.0078	0.005232001
595	0.6676301		0.0114	0.007610983
600	0.6714802		0.015	0.010072203
605	0.6725507		0.026263	0.017663199
610	0.6690519		0.052	0.034790699
615	0.6719626		0.088388	0.05939343
620	0.6720998		0.175	0.117617465
625	0.6762452		0.43288	0.292733022
630	0.6798867		0.6138	0.417314456
635	0.676311		0.67756	0.458241281
640	0.6748682		0.7448	0.502641835
645	0.6741964		0.82458	0.555928868
650	0.673932		0.8897	0.5995973
655	0.6795201		0.89654	0.60921695
660	0.6706313		0.9034	0.605848316
665	0.6688191		0.91051	0.608966479
670	0.656051		0.9172	0.601729977
675	0.6666666		0.92241	0.614939939
680	0.6632996		0.9276	0.615276709

685	0.6640502	0.93254	0.619253374
690	0.6590604	0.9379	0.618132749
695	0.6615384	0.9448	0.62502148
700	0.6589716	0.9517	0.627143272
705	0.6563107	0.9586	0.629139437
710	0.6575342	0.9655	0.63484927
715	0.6558669	0.97304	0.638184728
720	0.6475548	0.9793	0.634150416
725	0.6470588	0.9802	0.634247036
730	0.6435224	0.9828	0.632453815
735	0.640851	0.98838	0.633404311
740	0.6403897	0.9931	0.635971011
745	0.6393013	0.99719	0.637504863
750	0.6454317	1	0.6454317
755	0.6435563	1	0.6435563
760	0.6472	1	0.6472
765	0.6462264	1	0.6462264
770	0.645768	1	0.645768
775	0.6463513	0.99814	0.645149087
780	0.6445183	0.9966	0.642326938
785	0.6475771	0.99543	0.644617673
790	0.6435185	0.9945	0.639979148
795	0.6450677	0.9938	0.64106828
800	0.6517767	0.9931	0.647279441
805	0.6488706	0.9862	0.639916186
810	0.6482052	0.9793	0.634787352
815	0.6491416	0.97283	0.631504423
820	0.6461039	0.9655	0.623813315
825	0.6456954	0.95515	0.616735961
830	0.6498317	0.9448	0.61396099
835	0.6450116	0.93402	0.602453735
840	0.647343	0.9241	0.598209666
845	0.6449184	0.9172	0.591519156
850	0.6507936	0.9103	0.592417414
855	0.6473029	0.86334	0.558842486
860	0.6401734	0.8	0.51213872
865	0.6300752	0.72848	0.458997182
870	0.636218	0.6552	0.416850034
875	0.624374	0.58016	0.36223682
880	0.6013986	0.5034	0.302744055
885	0.5779467	0.42523	0.245760275
890	0.5645161	0.3448	0.194645151
895	0.5598291	0.25704	0.143898472
900	0.5605382	0.175	0.098094185
905	0.5811765	0.11009	0.063981721
910	0.5975308	0.0621	0.037106663
915	0.6153846	0.043125	0.026538461
920	0.6223404	0.0276	0.017176595
925	0.6368715	0.015525	0.00988743
930	0.6422288	0.0069	0.004431379
935	0.6563467	0	0
940	0.6580645	0	0
945	0.6329966	0	0
950	0.65	0	0
<b>SUM:</b>		31.63307341	
<b>T<sub>NVG</sub>(SUM/NVG):</b>		0.64956949	(SPECTRAL TRANSMISSION COEFFICIENT)

# **F-18**

**Aircraft:** F-18

**Part Name:** Windscreen, SWEDLOW

**Manufactured:** N/A

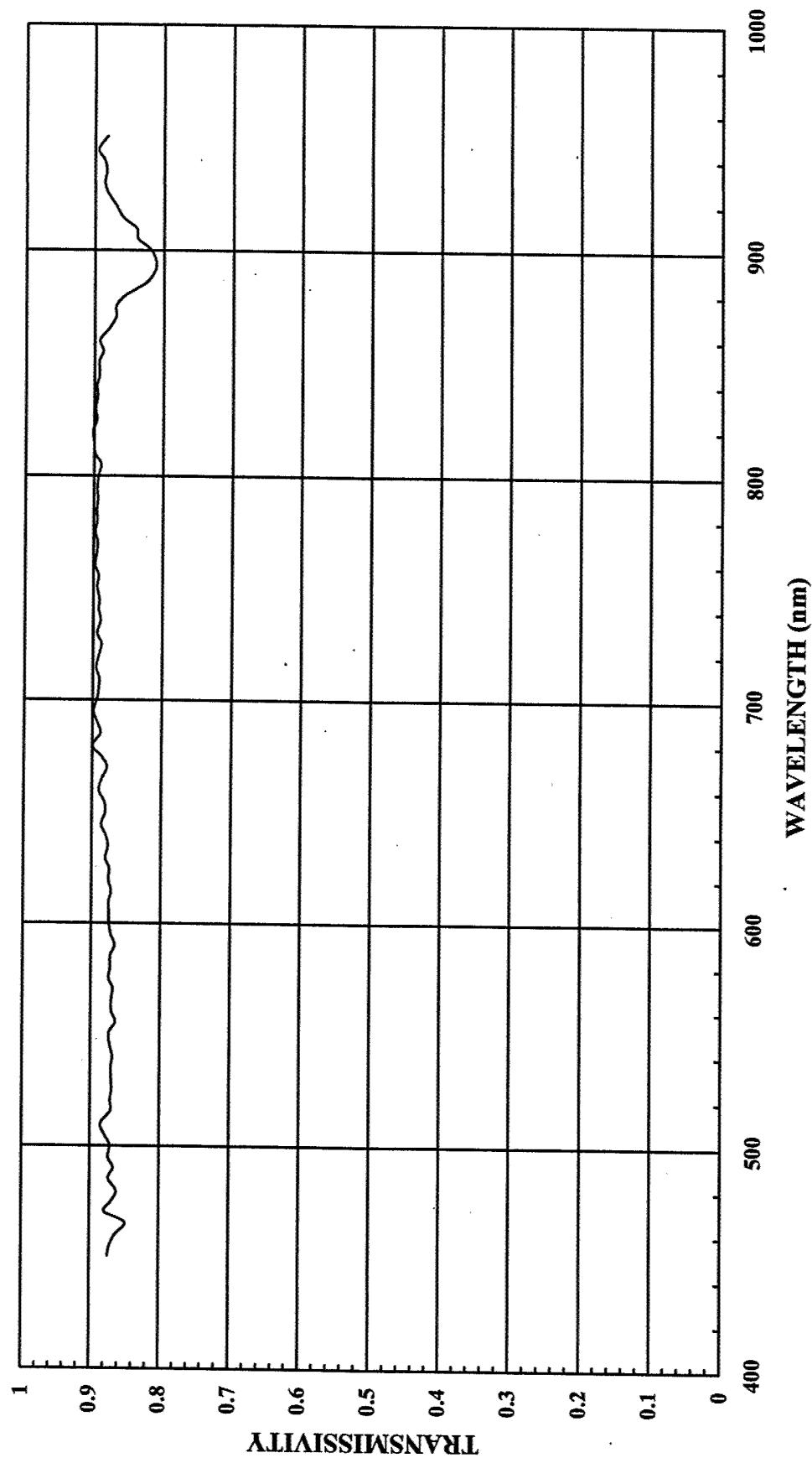
**S/N#** 331

**Material Type:** N/A

**Construction:** N/A

**Coating:** N/A

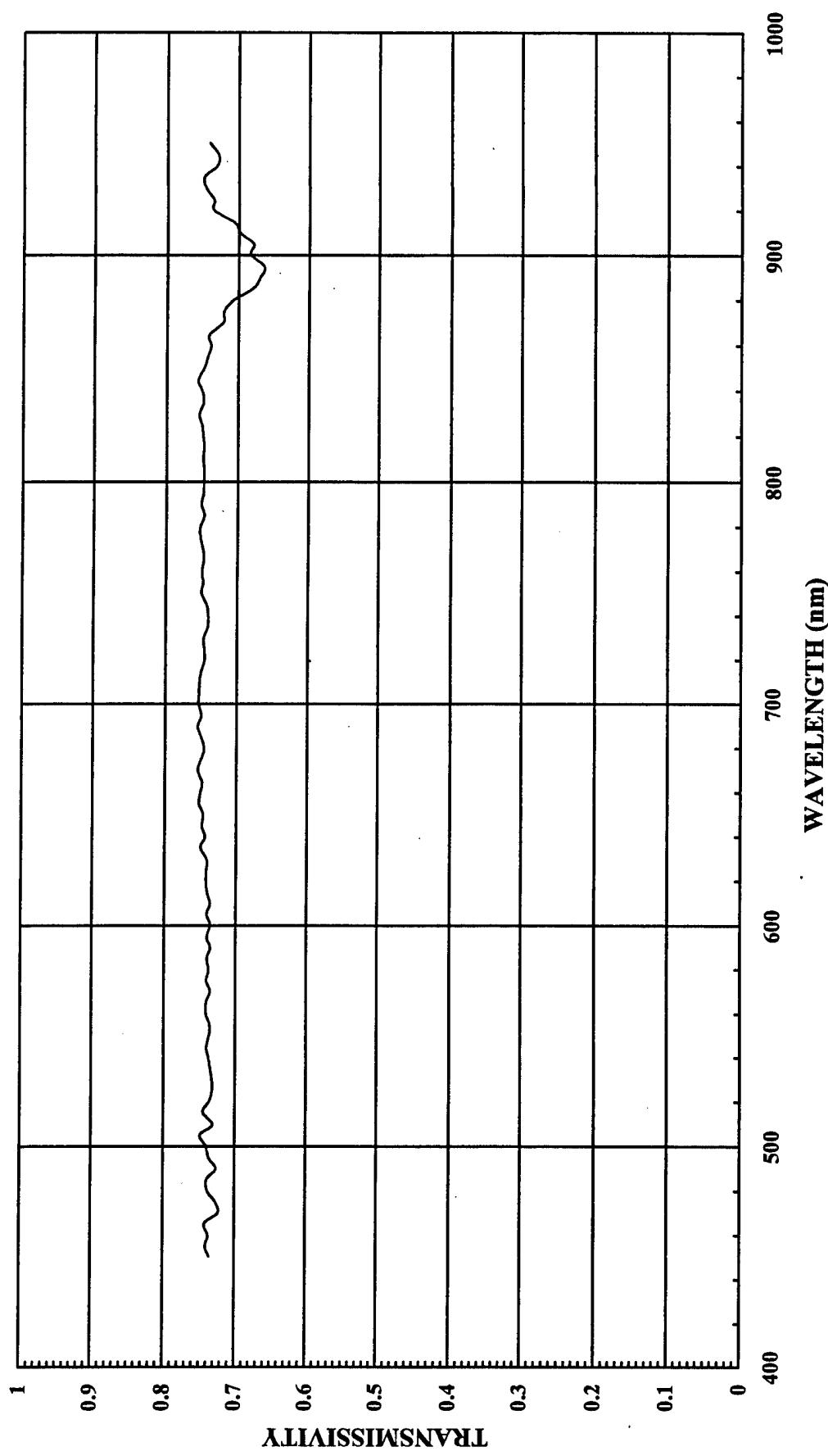
F-18 WINDSCREEN (SWEDLOW, S/N# 331) @ NORMAL  
T<sub>avg</sub> = 89%



<b>F-18, SWEDLOW, S/N# 331 @ NORMAL</b>			
	<b>SPECTRA- RADIOMETRIC</b>	<b>RELATIVE SPECTRAL SENSITIVITY</b>	<b>NVG SPECTRAL RESPONSE</b>
<b>WAVELENGTH(nm)</b>	<b>READING</b>	<b>"NVIS A"</b>	
450	0.8743315	0.0001	8.74332E-05
455	0.8712872	0.0001125	9.80198E-05
460	0.8640553	0.000123	0.000106279
465	0.8495575	0.0001375	0.000116814
470	0.8787879	0.00015	0.000131818
475	0.8688525	0.00016172	0.000140511
480	0.8619329	0.000175	0.000150838
485	0.8733206	0.00019375	0.000169206
490	0.8666667	0.0002125	0.000184167
495	0.8739352	0.0002266	0.00019459
500	0.8714525	0.0002375	0.00020697
505	0.879661	0.00027656	0.000243279
510	0.8849999	0.0003125	0.000276562
515	0.8709677	0.00034279	0.000298559
520	0.8714285	0.000375	0.000326786
525	0.8694444	0.00041875	0.00036408
530	0.8700565	0.0004625	0.000402401
535	0.8704225	0.00050703	0.00044133
540	0.8683854	0.00055	0.000477612
545	0.8724227	0.00058359	0.000509137
550	0.8734491	0.000625	0.000545906
555	0.8645707	0.0007	0.000605199
560	0.8703923	0.000775	0.000674554
565	0.8705614	0.00085	0.000739977
570	0.8685083	0.000925	0.00080337
575	0.8744541	0.0014525	0.001270145
580	0.8722944	0.00198	0.001727143
585	0.8724544	0.0047175	0.004115804
590	0.8662551	0.0078	0.00675679
595	0.8718447	0.0114	0.00993903
600	0.8747731	0.015	0.013121597
605	0.874778	0.026263	0.022974295
610	0.8754513	0.052	0.045523468
615	0.8719626	0.088388	0.07707103
620	0.8756027	0.175	0.153230473
625	0.8745173	0.43288	0.378561049
630	0.8802282	0.6138	0.540284069
635	0.8765881	0.67756	0.593941033
640	0.8798587	0.7448	0.65531876
645	0.8862642	0.82458	0.730795734
650	0.8807659	0.8897	0.783617421
655	0.8827055	0.89654	0.791380789
660	0.8903226	0.9034	0.804317437
665	0.8869323	0.91051	0.807560728
670	0.8789809	0.9172	0.806201281
675	0.8868275	0.92241	0.818018554
680	0.9	0.9276	0.83484

685	0.8883648	0.93254	0.828435711
690	0.8932433	0.9379	0.837772891
695	0.8990384	0.9448	0.84941148
700	0.8940189	0.9517	0.850837787
705	0.8918129	0.9586	0.854891846
710	0.8911253	0.9655	0.860381477
715	0.8954306	0.97304	0.871289791
720	0.8914334	0.9793	0.872980729
725	0.8878583	0.9802	0.870278706
730	0.8941979	0.9828	0.878817696
735	0.8894601	0.98838	0.879124574
740	0.8923488	0.9931	0.886191593
745	0.8912281	0.99719	0.888723749
750	0.8947812	1	0.8947812
755	0.8925349	1	0.8925349
760	0.8978279	1	0.8978279
765	0.895899	1	0.895899
770	0.8944883	1	0.8944883
775	0.8978278	0.99814	0.89615784
780	0.8951747	0.9966	0.892131106
785	0.8957597	0.99543	0.891666078
790	0.8942486	0.9945	0.889330233
795	0.8953488	0.9938	0.889797637
800	0.8937247	0.9931	0.887558
805	0.8898043	0.9862	0.877525001
810	0.8987603	0.9793	0.880155962
815	0.9002146	0.97283	0.875755769
820	0.9018538	0.9655	0.870739844
825	0.8962472	0.95515	0.856050513
830	0.8986487	0.9448	0.849043292
835	0.8953488	0.93402	0.836273686
840	0.8968446	0.9241	0.828774095
845	0.8929471	0.9172	0.81901108
850	0.8937583	0.9103	0.81358818
855	0.8875172	0.86334	0.766229099
860	0.892598	0.8	0.7140784
865	0.8804841	0.72848	0.641415057
870	0.8698413	0.6552	0.56992002
875	0.8695652	0.58016	0.504486946
880	0.85666433	0.5034	0.431234237
885	0.8273245	0.42523	0.351803197
890	0.8151093	0.3448	0.281049687
895	0.8114406	0.25704	0.208572692
900	0.8195992	0.175	0.14342986
905	0.8376471	0.11009	0.092216569
910	0.8405797	0.0621	0.052199999
915	0.8596938	0.043125	0.037074295
920	0.8709677	0.0276	0.024038709
925	0.8808864	0.015525	0.013675761
930	0.8859649	0.0069	0.006113158
935	0.8834356	0	0
940	0.8867314	0	0
945	0.8952703	0	0
950	0.8817205	0	0
<b>SUM:</b>		43.28462736	
<b>T<sub>NVG</sub>(SUM/NVG):</b>		0.888828378	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

F-18 WINDSCREEN (SWEDLOW, S/N#331) @ DESIGN EYE  
 $T_{\text{avg}} = 75\%$



**F-18, SWEDLOW, S/N# 331 @ DESIGN EYE**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG SPECTRAL RESPONSE
	RADIOMETRIC	SPECTRAL SENSITIVITY	
	READING	"NVIS A"	
450	0.736	0.0001	0.0000736
455	0.7412935	0.0001125	8.33955E-05
460	0.7373272	0.000123	9.06912E-05
465	0.7422222	0.0001375	0.000102056
470	0.7234043	0.00015	0.000108511
475	0.7265306	0.00016172	0.000117495
480	0.7380952	0.000175	0.000129167
485	0.7394636	0.00019375	0.000143271
490	0.7264653	0.0002125	0.000154374
495	0.7364865	0.00022266	0.000163986
500	0.7409241	0.0002375	0.000175969
505	0.7491639	0.00027656	0.000207189
510	0.7314662	0.0003125	0.000228583
515	0.7454268	0.00034279	0.000255525
520	0.7365439	0.000375	0.000276204
525	0.732687	0.00041875	0.000306813
530	0.7328672	0.0004625	0.000338951
535	0.7353761	0.00050703	0.000372858
540	0.7379032	0.00055	0.000405847
545	0.7410256	0.00058359	0.000432455
550	0.7371008	0.000625	0.000460688
555	0.7361445	0.0007	0.000515301
560	0.7417453	0.000775	0.000574853
565	0.7414966	0.00085	0.000630272
570	0.7357456	0.000925	0.000680565
575	0.7413794	0.0014525	0.001076854
580	0.7381974	0.00198	0.001461631
585	0.7407014	0.0047175	0.003494259
590	0.7357723	0.0078	0.005739024
595	0.7408829	0.0114	0.008446065
600	0.7363718	0.015	0.011045577
605	0.7411972	0.026263	0.019466062
610	0.7366071	0.052	0.038303569
615	0.7407408	0.088388	0.065472598
620	0.7428299	0.175	0.129995233
625	0.7419047	0.43288	0.321155707
630	0.741573	0.6138	0.455177507
635	0.7502254	0.67756	0.508322722
640	0.7443083	0.7448	0.554360822
645	0.748477	0.82458	0.617179165
650	0.7471764	0.8897	0.664762843
655	0.7527707	0.89654	0.674889043
660	0.7511395	0.9034	0.678579424
665	0.7486239	0.91051	0.681629547
670	0.754717	0.9172	0.692226432
675	0.7504521	0.92241	0.692224522
680	0.7458746	0.9276	0.691873279

685	0.7503876	0.93254	0.699766453
690	0.7550201	0.9379	0.708133352
695	0.75	0.9448	0.7086
700	0.754441	0.9517	0.7180015
705	0.7531584	0.9586	0.721977642
710	0.7527372	0.9655	0.726767767
715	0.7508711	0.97304	0.730627615
720	0.746005	0.9793	0.730562697
725	0.7464315	0.9802	0.731652156
730	0.747449	0.9828	0.734592877
735	0.7417163	0.98838	0.733097557
740	0.7411972	0.9931	0.736082939
745	0.7434783	0.99719	0.741389126
750	0.7506256	1	0.7506256
755	0.7485761	1	0.7485761
760	0.7503975	1	0.7503975
765	0.7478465	1	0.7478465
770	0.7492163	1	0.7492163
775	0.7524116	0.99814	0.751012114
780	0.7533445	0.9966	0.750783129
785	0.7475814	0.99543	0.744164953
790	0.7518587	0.9945	0.747723477
795	0.749031	0.9938	0.744387008
800	0.7482306	0.9931	0.743067809
805	0.7482014	0.9862	0.737876221
810	0.7494867	0.9793	0.733972325
815	0.7481323	0.97283	0.727805545
820	0.7497292	0.9655	0.723863543
825	0.7511013	0.95515	0.717414407
830	0.7550561	0.9448	0.713377003
835	0.7488372	0.93402	0.699428922
840	0.7512077	0.9241	0.694191036
845	0.756654	0.9172	0.694003049
850	0.748	0.9103	0.6809044
855	0.7434483	0.86334	0.641848655
860	0.7387518	0.8	0.59100144
865	0.7416413	0.72848	0.540270854
870	0.7213376	0.6552	0.472620396
875	0.7207358	0.58016	0.418142082
880	0.7082601	0.5034	0.356538134
885	0.6793894	0.42523	0.288896755
890	0.6700201	0.3448	0.23102293
895	0.6638478	0.25704	0.170635439
900	0.6832579	0.175	0.119570133
905	0.6790698	0.11009	0.074758794
910	0.6982968	0.0621	0.043364231
915	0.7063291	0.043125	0.030460442
920	0.735849	0.0276	0.020309432
925	0.7359551	0.015525	0.011425703
930	0.7463557	0.0069	0.005149854
935	0.749226	0	0
940	0.7320261	0	0
945	0.7290969	0	0
950	0.7418182	0	0
451	0.7401575		
<b>SUM:</b>		36.3118144	
<b>T<sub>nvg</sub>(SUM/NVG):</b>		0.745645119	(SPECTRAL TRANSMISSION COEFFICIENT)

# **F-18**

**Aircraft:** F-18

**Part Name:** Single seat Canopy 'A', SWEDLOW

**Manufactured:** N/A

**S/N#** N/A

**Material Type:** N/A

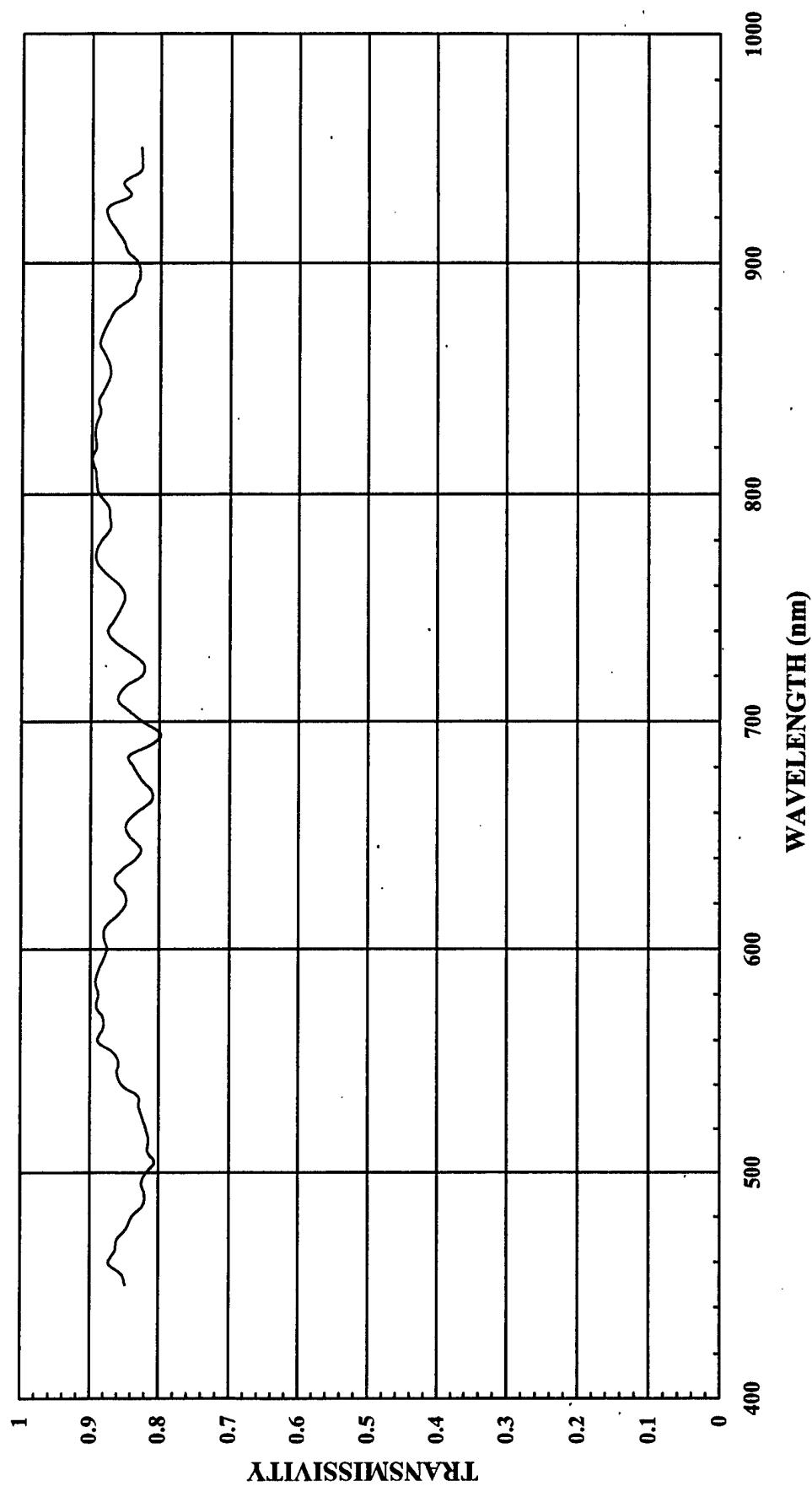
**Construction:** N/A

**Coating:** N/A

**F-18 CANOPY 'A' (SWEDLOW, SINGLE SEAT, NO SERIAL NUMBER)**

**@ NORMAL**

**$T_{avg} = 86\%$**



**F-18, SWEDLOW, SINGLE SEAT CANOPY "A", NO S/N# @ NORMAL**

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
	READING	"NVIS A"	
450	0.848	0.0001	0.0000848
455	0.8533834	0.0001125	9.60056E-05
460	0.8725664	0.000123	0.000107326
465	0.8631052	0.0001375	0.000118677
470	0.8603896	0.00015	0.000129058
475	0.846875	0.00016172	0.000136957
480	0.8375559	0.000175	0.000146572
485	0.8225108	0.00019375	0.000159361
490	0.8198075	0.0002125	0.000174209
495	0.8241336	0.00022266	0.000183502
500	0.8171642	0.0002375	0.000194076
505	0.8057285	0.00027656	0.000222832
510	0.8155941	0.0003125	0.000254873
515	0.8143361	0.00034279	0.000279146
520	0.8177874	0.000375	0.00030667
525	0.8226804	0.00041875	0.000344497
530	0.8284823	0.0004625	0.000383173
535	0.8291667	0.00050703	0.000420412
540	0.85261	0.00055	0.000468936
545	0.8605769	0.00058359	0.000502224
550	0.8578024	0.000625	0.000536127
555	0.8665464	0.0007	0.000606582
560	0.8889875	0.000775	0.000688965
565	0.8812981	0.00085	0.000749103
570	0.88109	0.000925	0.000815008
575	0.891129	0.0014525	0.001294365
580	0.8880952	0.00198	0.001758428
585	0.8921491	0.0047175	0.004208713
590	0.8890601	0.0078	0.006934669
595	0.8824818	0.0114	0.010060293
600	0.8758481	0.015	0.013137722
605	0.8798956	0.026263	0.023108698
610	0.8781925	0.052	0.04566601
615	0.8588957	0.088388	0.075916073
620	0.8478873	0.175	0.148380278
625	0.8496454	0.43288	0.367794501
630	0.8648649	0.6138	0.530854076
635	0.854054	0.67756	0.578672828
640	0.8332239	0.7448	0.620585161
645	0.8263091	0.82458	0.681357958
650	0.8434728	0.8897	0.75043775
655	0.8478803	0.89654	0.760158604
660	0.834446	0.9034	0.753838516
665	0.8112094	0.91051	0.738614271
670	0.8113208	0.9172	0.744143438
675	0.8255814	0.92241	0.761524539
680	0.8371778	0.9276	0.776566127
685	0.8435961	0.93254	0.786687107
690	0.8124353	0.9379	0.761983068

695	0.7987307	0.9448	0.754640765
700	0.8251193	0.9517	0.785266038
705	0.8440233	0.9586	0.809080735
710	0.8600683	0.9655	0.830395944
715	0.8499678	0.97304	0.827052668
720	0.8257622	0.9793	0.808668922
725	0.8219767	0.9802	0.805701561
730	0.8376703	0.9828	0.823262371
735	0.8649155	0.98838	0.854865182
740	0.8752437	0.9931	0.869204518
745	0.8664516	0.99719	0.864016871
750	0.855985	1	0.855985
755	0.8501529	1	0.8501529
760	0.8568873	1	0.8568873
765	0.8779343	1	0.8779343
770	0.8911524	1	0.8911524
775	0.893026	0.99814	0.891364972
780	0.8859755	0.9966	0.882963183
785	0.8725049	0.99543	0.868517553
790	0.8732203	0.9945	0.868417588
795	0.8751773	0.9938	0.869751201
800	0.8896346	0.9931	0.883496121
805	0.8925304	0.9862	0.88021348
810	0.8943338	0.9793	0.87582109
815	0.8993558	0.97283	0.874920303
820	0.8928571	0.9655	0.86205353
825	0.8949545	0.95515	0.854815791
830	0.89385	0.9448	0.84450948
835	0.8870547	0.93402	0.828526831
840	0.8898917	0.9241	0.82234892
845	0.8820224	0.9172	0.808990945
850	0.8734053	0.9103	0.795060845
855	0.8739753	0.86334	0.754537836
860	0.8805166	0.8	0.70441328
865	0.8883879	0.72848	0.647172817
870	0.8825623	0.6552	0.578254819
875	0.8746899	0.58016	0.507460092
880	0.8650065	0.5034	0.435444272
885	0.8403361	0.42523	0.35733612
890	0.8353294	0.3448	0.288021577
895	0.8293839	0.25704	0.213184838
900	0.8327703	0.175	0.145734803
905	0.8473684	0.11009	0.093286787
910	0.8540146	0.0621	0.053034307
915	0.865019	0.043125	0.037303944
920	0.8770161	0.0276	0.024205644
925	0.8757895	0.015525	0.013596632
930	0.8434783	0.0069	0.00582
935	0.8534279	0	0
940	0.8293269	0	0
945	0.8265306	0	0
950	0.8274932	0	0
<b>SUM:</b>		41.88663936	
<b>T<sub>Nvg</sub>(SUM/NVG):</b>		0.860121387	<b>(SPECTRAL</b>
			<b>TRANSMISSION</b>
			<b>COEFFICIENT)</b>

# **F-18**

**Aircraft:** F-18

**Part Name:** Rear Canopy, SWEDLOW

**Manufactured:** N/A

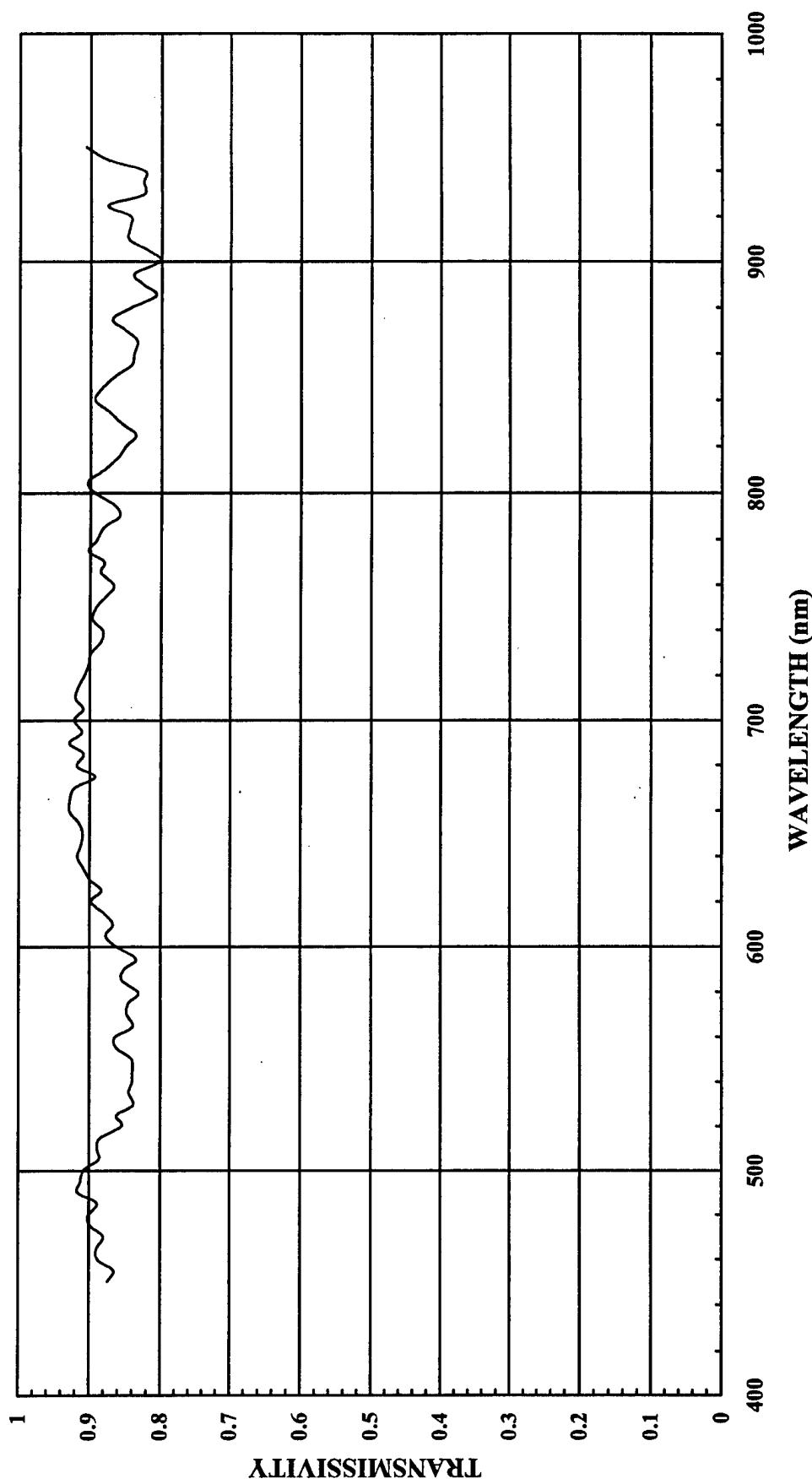
**S/N#** SWU-125

**Material Type:** N/A

**Construction:** N/A

**Coating:** Acrylic

F-18 REAR CANOPY (SWEDLOW, ACRYLIC, S/N#SWU-125) @ NORMAL  
T<sub>avg</sub> = 89%



**F-18, SWEDLOW, REAR CANOPY, ACRYLIC, S/N# SWU-125 @ NORMAL**

WAVELENGTH(nm)	<u>SPECTRA-</u>	<u>RELATIVE</u>	<u>NVG</u>
	<u>RADIOMETRIC</u>	<u>SPECTRAL SENSITIVITY</u>	<u>SPECTRAL</u>
READING	"NVIS A"	RESPONSE	
450	0.8743169	0.0001	8.74317E-05
455	0.8656716	0.0001125	9.73881E-05
460	0.8873239	0.000123	0.000109141
465	0.8899083	0.0001375	0.000122362
470	0.8799999	0.00015	0.000132
475	0.8974359	0.00016172	0.000145133
480	0.9012346	0.000175	0.000157716
485	0.8888889	0.00019375	0.000172222
490	0.9160305	0.0002125	0.000194656
495	0.9124088	0.0002266	0.000203157
500	0.9071428	0.0002375	0.000215446
505	0.8865248	0.00027656	0.000245177
510	0.8885018	0.0003125	0.000277657
515	0.885246	0.00034279	0.000303453
520	0.8545994	0.000375	0.000320475
525	0.8617647	0.00041875	0.000360864
530	0.8387097	0.0004625	0.000387903
535	0.8445748	0.00050703	0.000428225
540	0.8398876	0.00055	0.000461938
545	0.8395721	0.00058359	0.000489966
550	0.8410256	0.000625	0.000525641
555	0.8618926	0.0007	0.000603325
560	0.8643216	0.000775	0.000669849
565	0.8393285	0.00085	0.000713429
570	0.8477752	0.000925	0.000784192
575	0.8454333	0.0014525	0.001227992
580	0.8313818	0.00198	0.001646136
585	0.8544601	0.0047175	0.004030916
590	0.8515982	0.0078	0.006642466
595	0.8347826	0.0114	0.009516522
600	0.8636364	0.015	0.012954546
605	0.8772635	0.026263	0.023039571
610	0.8669439	0.052	0.045081083
615	0.8782051	0.088388	0.077622792
620	0.8973799	0.175	0.157041483
625	0.8836207	0.43288	0.382501729
630	0.8991597	0.6138	0.551904224
635	0.9096385	0.67756	0.616334662
640	0.9174852	0.7448	0.683342977
645	0.9126213	0.82458	0.752529272
650	0.9096154	0.8897	0.809284821
655	0.9157088	0.89654	0.820969568
660	0.9282787	0.9034	0.838606978
665	0.9277778	0.91051	0.844750965
670	0.9210526	0.9172	0.844789445
675	0.8924303	0.92241	0.823186633
680	0.917647	0.9276	0.851209357

685	0.9087838	0.93254	0.847477245
690	0.9287834	0.9379	0.871105951
695	0.9112271	0.9448	0.860927364
700	0.9223529	0.9517	0.877803255
705	0.909292	0.9586	0.871647311
710	0.9206008	0.9655	0.888840072
715	0.9156119	0.97304	0.890927003
720	0.907563	0.9793	0.888776446
725	0.9019189	0.9802	0.884060906
730	0.8991031	0.9828	0.883638527
735	0.8837209	0.98838	0.873452063
740	0.8823529	0.9931	0.876264665
745	0.8965517	0.99719	0.89403239
750	0.8907767	1	0.8907767
755	0.8771085	1	0.8771085
760	0.8666666	1	0.8666666
765	0.884892	1	0.884892
770	0.8803827	1	0.8803827
775	0.9019608	0.99814	0.900283153
780	0.8911393	0.9966	0.888109426
785	0.8807588	0.99543	0.876733732
790	0.8591549	0.9945	0.854429548
795	0.8658892	0.9938	0.860520687
800	0.8953846	0.9931	0.889206446
805	0.903125	0.9862	0.890661875
810	0.88125	0.9793	0.863008125
815	0.8608414	0.97283	0.837452339
820	0.8504984	0.9655	0.821156205
825	0.8366666	0.95515	0.799142103
830	0.8556701	0.9448	0.80843711
835	0.8754448	0.93402	0.817682952
840	0.8939394	0.9241	0.8260894
845	0.8846154	0.9172	0.811369245
850	0.8645418	0.9103	0.786992401
855	0.8423236	0.86334	0.727211657
860	0.8391305	0.8	0.6713044
865	0.8348214	0.72848	0.608150693
870	0.8518519	0.6552	0.558133365
875	0.8695651	0.58016	0.504486888
880	0.8446602	0.5034	0.425201945
885	0.8080809	0.42523	0.343620241
890	0.8263158	0.3448	0.284913688
895	0.8388889	0.25704	0.215628003
900	0.8023255	0.175	0.140406963
905	0.8198758	0.11009	0.090260127
910	0.8466667	0.0621	0.052578002
915	0.8450704	0.043125	0.036443661
920	0.8444445	0.0276	0.023306668
925	0.8760331	0.015525	0.013600414
930	0.8264462	0.0069	0.005702479
935	0.8260869	0	0
940	0.8245614	0	0
945	0.8761904	0	0
950	0.9062499	0	0
<b>SUM:</b>		43.20742652	
<b>T<sub>Nvg</sub>(SUM/NVG):</b>		0.887243097	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **F-18**

**Aircraft:** F-18

**Part Name:** Windscreen, LLAMAS

**Manufactured:** N/A

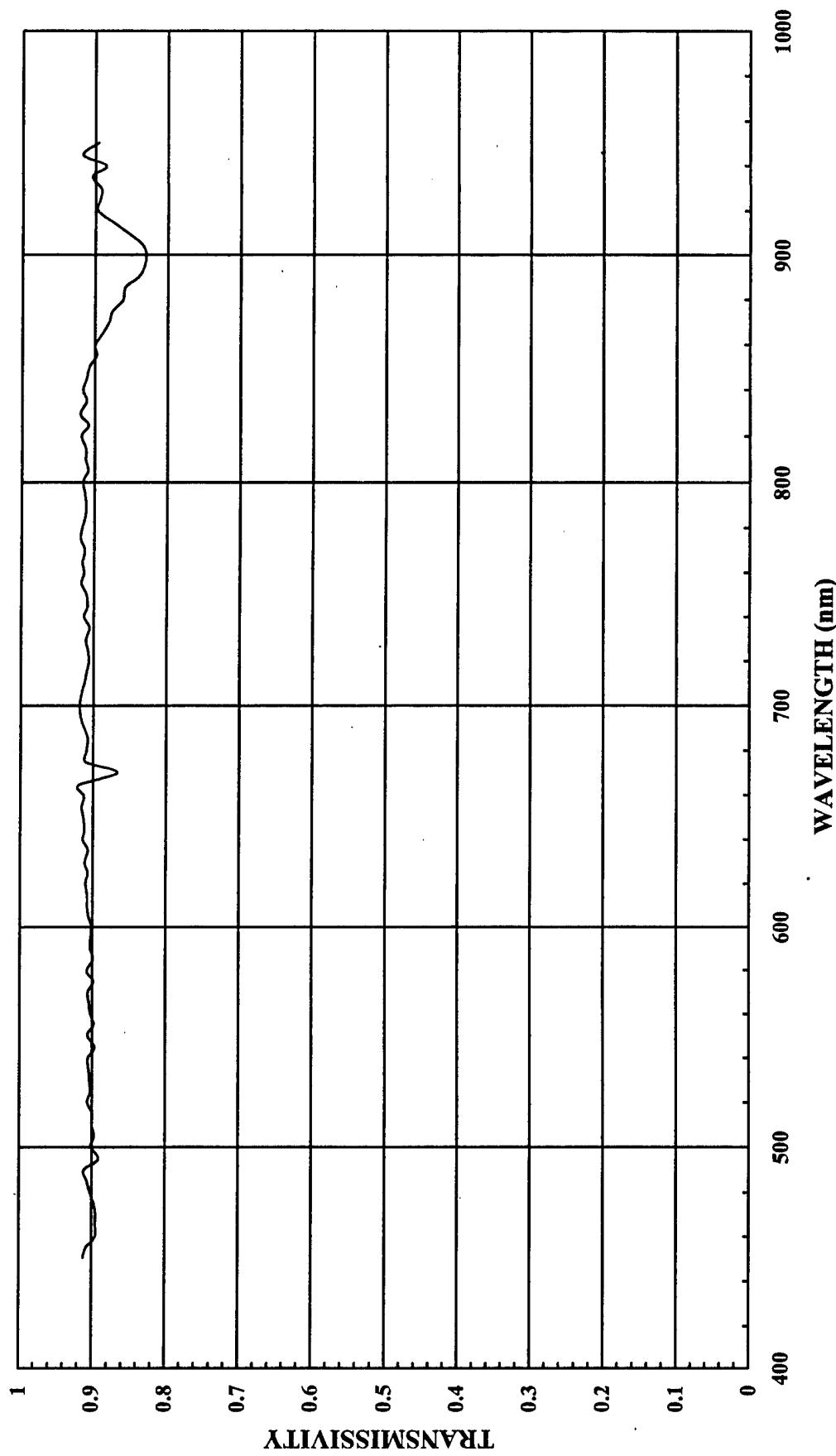
**S/N#** 062

**Material Type:** N/A

**Construction:** N/A

**Coating:** N/A

F-18 WINDSCREEN (LLAMAS, S/N# 062) @ NORMAL  
T<sub>avg</sub> = 91 %

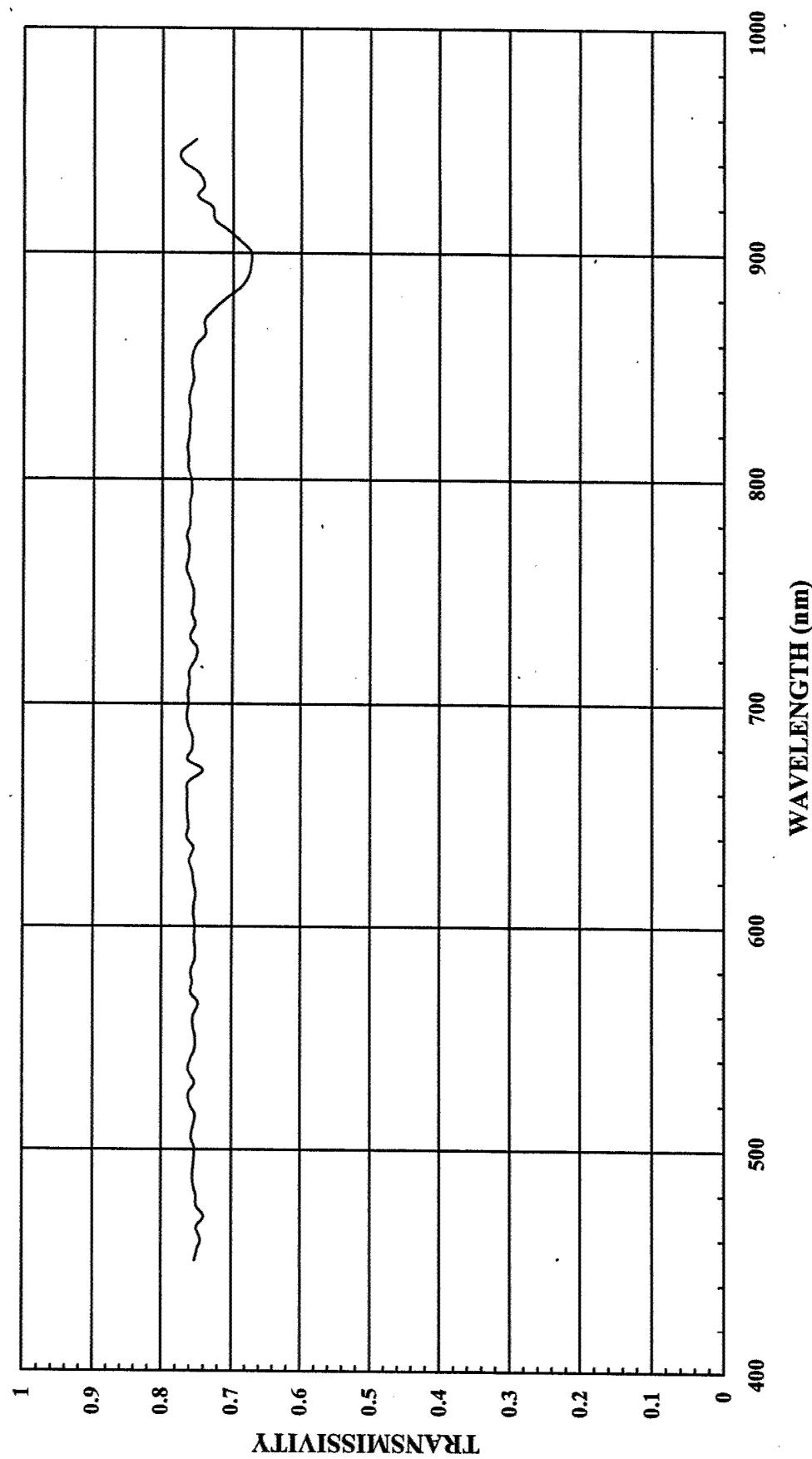


**F-18 WINDSCREEN, LLAMAS, S/N# 062, @ NORMAL**

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC READING	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
450	0.9122341	0.0001	9.12234E-05
455	0.9079602	0.0001125	0.000102146
460	0.8958333	0.000123	0.000110187
465	0.8955556	0.0001375	0.000123139
470	0.895075	0.00015	0.000134261
475	0.8971193	0.00016172	0.000145082
480	0.9021956	0.000175	0.000157884
485	0.9071566	0.00019375	0.000175762
490	0.9109091	0.0002125	0.000193568
495	0.8915254	0.00022266	0.000198507
500	0.9015025	0.0002375	0.000214107
505	0.8971332	0.00027656	0.000248111
510	0.9003322	0.0003125	0.000281354
515	0.9	0.00034279	0.000308511
520	0.9066092	0.000375	0.000339978
525	0.9027778	0.00041875	0.000378038
530	0.9036826	0.0004625	0.000417953
535	0.9052334	0.00050703	0.00045898
540	0.9059945	0.00055	0.000498297
545	0.8967742	0.00058359	0.000523348
550	0.9067164	0.000625	0.000566698
555	0.8978102	0.0007	0.000628467
560	0.902497	0.000775	0.000699435
565	0.9047073	0.00085	0.000769001
570	0.9063545	0.000925	0.000838378
575	0.8988031	0.0014525	0.001305512
580	0.9076087	0.00198	0.001797065
585	0.8992497	0.0047175	0.00424221
590	0.9028926	0.0078	0.007042562
595	0.9025341	0.0114	0.010288889
600	0.9019074	0.015	0.013528611
605	0.9060283	0.026263	0.023795021
610	0.9077758	0.052	0.047204342
615	0.9072165	0.088388	0.080187052
620	0.9098837	0.175	0.159229648
625	0.9069767	0.43288	0.392612074
630	0.9115129	0.6138	0.559486618
635	0.9071039	0.67756	0.614617318
640	0.9140071	0.7448	0.680752488
645	0.9117132	0.82458	0.75178047
650	0.9133858	0.8897	0.812639346
655	0.9156626	0.89654	0.820928147
660	0.9125231	0.9034	0.824373369
665	0.9202226	0.91051	0.83787188
670	0.8670886	0.9172	0.795293664
675	0.9097607	0.92241	0.839172367
680	0.909396	0.9276	0.84355573
685	0.9078125	0.93254	0.846571469

690	0.9123989	0.9379	0.855738928
695	0.9175627	0.9448	0.866913239
700	0.9188619	0.9517	0.87448087
705	0.9166666	0.9586	0.878716603
710	0.9126838	0.9655	0.881196209
715	0.9098074	0.97304	0.885278992
720	0.9067006	0.9793	0.887931898
725	0.9081718	0.9802	0.890189998
730	0.9104859	0.9828	0.894825543
735	0.905822	0.98838	0.895296348
740	0.9133929	0.9931	0.907090489
745	0.908772	0.99719	0.906218351
750	0.9107745	1	0.9107745
755	0.9176277	1	0.9176277
760	0.9139872	1	0.9139872
765	0.9161392	1	0.9161392
770	0.9133176	1	0.9133176
775	0.9184827	0.99814	0.916774322
780	0.9170854	0.9966	0.91396731
785	0.9124668	0.99543	0.908296827
790	0.91171	0.9945	0.906695595
795	0.9132555	0.9938	0.907593316
800	0.9157361	0.9931	0.909417521
805	0.9090909	0.9862	0.896545446
810	0.9124613	0.9793	0.893573351
815	0.9120172	0.97283	0.887237693
820	0.9181223	0.9655	0.886447081
825	0.9084895	0.95515	0.867743746
830	0.9199548	0.9448	0.869173295
835	0.9114219	0.93402	0.851286283
840	0.9162621	0.9241	0.846717807
845	0.9118388	0.9172	0.836338547
850	0.9074074	0.9103	0.826012956
855	0.8980716	0.86334	0.775341135
860	0.9001448	0.8	0.72011584
865	0.8910742	0.72848	0.649129733
870	0.881141	0.6552	0.577323583
875	0.8764608	0.58016	0.508487498
880	0.862676	0.5034	0.434271098
885	0.8593156	0.42523	0.365406773
890	0.8410463	0.3448	0.289992764
895	0.8333333	0.25704	0.214199991
900	0.8306997	0.175	0.145372448
905	0.8368298	0.11009	0.092126593
910	0.8550724	0.0621	0.053099996
915	0.8746803	0.043125	0.037720588
920	0.8972973	0.0276	0.024765405
925	0.8938547	0.015525	0.013877094
930	0.8921283	0.0069	0.006155685
935	0.9040248	0	0
940	0.8853503	0	0
945	0.9172414	0	0
950	0.8956834	0	0
<b>SUM:</b>		44.20380926	
<b>Tnvg(SUM/NVG):</b>		0.907703323	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

F-18 WINDSCREEN (LLAMAS, S/N#062) @ DESIGN EYE  
 $T_{avg} = 76\%$



F-18 WINDSCREEN, LLAMAS, S/N# 062, @ DESIGN EYE

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
	READING	"NVIS A"	
450	0.7526316	0.0001	7.52632E-05
455	0.7487685	0.0001125	8.42365E-05
460	0.7442922	0.000123	9.15479E-05
465	0.75	0.0001375	0.000103125
470	0.739785	0.00015	0.000110968
475	0.7499999	0.00016172	0.00012129
480	0.750495	0.000175	0.000131337
485	0.7547893	0.00019375	0.00014624
490	0.7549549	0.0002125	0.000160428
495	0.7538201	0.00022266	0.000167846
500	0.7524917	0.0002375	0.000178717
505	0.7571189	0.00027656	0.000209389
510	0.7549669	0.0003125	0.000235927
515	0.7519026	0.00034279	0.000257745
520	0.7596017	0.000375	0.000284851
525	0.7614424	0.00041875	0.000318854
530	0.7528089	0.0004625	0.000348174
535	0.7619718	0.00050703	0.000386343
540	0.7588075	0.00055	0.000417344
545	0.7525641	0.00058359	0.000439189
550	0.7521578	0.000625	0.000470099
555	0.7548309	0.0007	0.000528382
560	0.754717	0.000775	0.000584906
565	0.7477273	0.00085	0.000635568
570	0.7585825	0.000925	0.000701689
575	0.7559653	0.0014525	0.00109804
580	0.7580994	0.00198	0.001501037
585	0.7523911	0.0047175	0.003549405
590	0.7520409	0.0078	0.005865919
595	0.7533719	0.0114	0.00858844
600	0.7527076	0.015	0.011290614
605	0.7544169	0.026263	0.019813251
610	0.754025	0.052	0.0392093
615	0.7518519	0.088388	0.066454686
620	0.754771	0.175	0.132084925
625	0.7567307	0.43288	0.327573585
630	0.7610536	0.6138	0.4671347
635	0.754734	0.67756	0.511377569
640	0.7644991	0.7448	0.56939893
645	0.7624021	0.82458	0.628661524
650	0.7638888	0.8897	0.679631865
655	0.7645547	0.89654	0.685453871
660	0.7639015	0.9034	0.690108615
665	0.7628676	0.91051	0.694598578
670	0.7421384	0.9172	0.68068934
675	0.7636364	0.92241	0.704385852
680	0.7571189	0.9276	0.702303492
685	0.7562112	0.93254	0.705197192

690	0.7623498	0.9379	0.715007877
695	0.7648457	0.9448	0.722626217
700	0.7628004	0.9517	0.725957141
705	0.7633366	0.9586	0.731734465
710	0.7607306	0.9655	0.734485394
715	0.7613636	0.97304	0.740837237
720	0.7516779	0.9793	0.736118167
725	0.7504188	0.9802	0.735560508
730	0.7599661	0.9828	0.746894683
735	0.7527707	0.98838	0.744023504
740	0.757522	0.9931	0.752295098
745	0.7554395	0.99719	0.753316715
750	0.7552214	1	0.7552214
755	0.7600328	1	0.7600328
760	0.7657874	1	0.7657874
765	0.7628053	1	0.7628053
770	0.7617555	1	0.7617555
775	0.7652733	0.99814	0.763849892
780	0.7608333	0.9966	0.758246467
785	0.7605633	0.99543	0.757087526
790	0.7606679	0.9945	0.756484227
795	0.7577519	0.9938	0.753053838
800	0.7590726	0.9931	0.753834999
805	0.7631851	0.9862	0.752653146
810	0.763077	0.9793	0.747281306
815	0.764454	0.97283	0.743683785
820	0.7613882	0.9655	0.735120307
825	0.7610132	0.95515	0.726881758
830	0.7595078	0.9448	0.717582969
835	0.7627907	0.93402	0.71246177
840	0.7593712	0.9241	0.701734926
845	0.755611	0.9172	0.693046409
850	0.7582563	0.9103	0.69024071
855	0.7572815	0.86334	0.65379141
860	0.7518038	0.8	0.60144304
865	0.7394578	0.72848	0.538680218
870	0.7404459	0.6552	0.485140154
875	0.7283334	0.58016	0.422549905
880	0.7112676	0.5034	0.35805211
885	0.6873823	0.42523	0.292295575
890	0.6774194	0.3448	0.233574209
895	0.6737288	0.25704	0.173175251
900	0.6734234	0.175	0.117849095
905	0.6885245	0.11009	0.075799662
910	0.7066014	0.0621	0.043879947
915	0.7258883	0.043125	0.031303933
920	0.729443	0.0276	0.020132627
925	0.75	0.015525	0.01164375
930	0.7412791	0.0069	0.005114826
935	0.7484663	0	0
940	0.7694805	0	0
945	0.7739726	0	0
950	0.7518248	0	0
<b>SUM:</b>		<b>36.81526934</b>	
<b>Tnvg(SUM/NVG):</b>		<b>0.755983727</b>	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

## **PROTOTYPES**

# **NEXT GENERATION TRANSPARENCY**

**Aircraft:** N/A

**Part Name:** Transparency

**Manufactured:** N/A

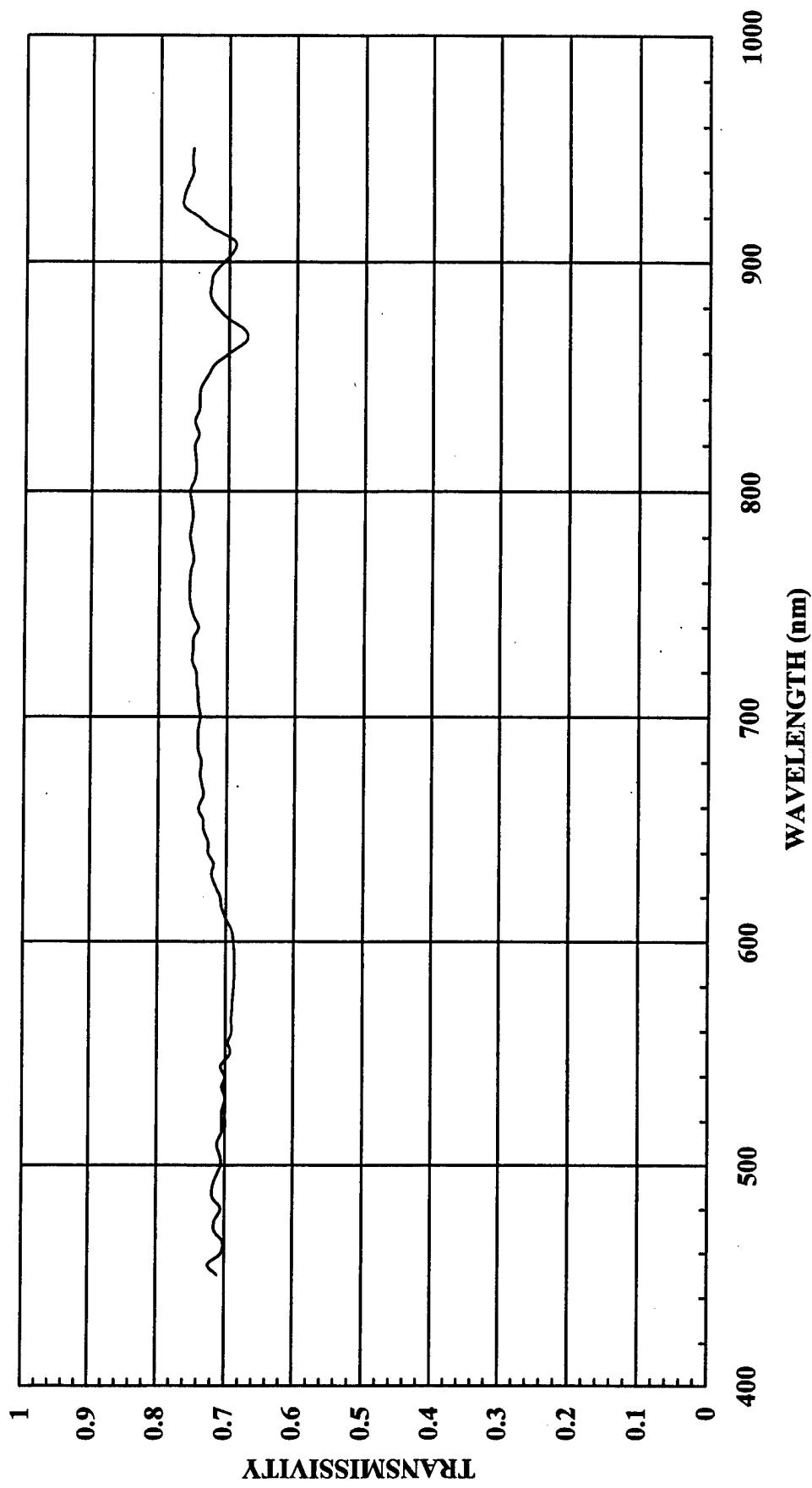
**S/N#** OEP-38D

**Material Type:** N/A

**Construction:** N/A

**Coating:** N/A

NEXT GENERATION TRANSPARENCY (S/N# OEP-38D) @ NORMAL  
 $T_{\text{avg}} = 74\%$



**NEXT GENERATION TRANSPARENCY, S/N# OEP-38D, @ NORMAL**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
	READING	"NVIS A"	RESPONSE
450	0.7106383	0.0001	7.10638E-05
455	0.7237903	0.0001125	8.14264E-05
460	0.7055556	0.000123	8.67833E-05
465	0.7029877	0.0001375	9.66608E-05
470	0.7145329	0.00015	0.00010718
475	0.7145215	0.00016172	0.000115552
480	0.7059748	0.000175	0.000123546
485	0.7171254	0.00019375	0.000138943
490	0.7180232	0.0002125	0.00015258
495	0.7135135	0.00022266	0.000158871
500	0.7060367	0.0002375	0.000167684
505	0.7076719	0.00027656	0.000195714
510	0.7116645	0.0003125	0.000222395
515	0.7047387	0.00034279	0.000241577
520	0.7048261	0.000375	0.00026431
525	0.704793	0.00041875	0.000295132
530	0.7004405	0.0004625	0.000323954
535	0.7052979	0.00050703	0.000357607
540	0.7008547	0.00055	0.00038547
545	0.7067745	0.00058359	0.000412467
550	0.692974	0.000625	0.000433109
555	0.6965973	0.0007	0.000487618
560	0.6912442	0.000775	0.000535714
565	0.6916221	0.00085	0.000587879
570	0.6904557	0.000925	0.000638672
575	0.6893939	0.0014525	0.001001345
580	0.6880734	0.00198	0.001362385
585	0.6873964	0.0047175	0.003242793
590	0.6876495	0.0078	0.005363666
595	0.6871718	0.0114	0.007833759
600	0.6890756	0.015	0.010336134
605	0.6915254	0.026263	0.018161532
610	0.6993781	0.052	0.036367661
615	0.7068215	0.088388	0.062474539
620	0.7086731	0.175	0.124017793
625	0.7153503	0.43288	0.309660838
630	0.7217391	0.6138	0.44300346
635	0.7185965	0.67756	0.486892245
640	0.7266484	0.7448	0.541207728
645	0.7268487	0.82458	0.599344901
650	0.7332448	0.8897	0.652367899
655	0.734127	0.89654	0.658174221
660	0.7406361	0.9034	0.669090653
665	0.7336493	0.91051	0.667995024
670	0.7361963	0.9172	0.675239246
675	0.7388168	0.92241	0.681492004
680	0.7367688	0.9276	0.683426739
685	0.7414634	0.93254	0.691444279
690	0.7418677	0.9379	0.695797716
695	0.7419056	0.9448	0.700952411

700	0.7388121	0.9517	0.703127476
705	0.7415223	0.9586	0.710823277
710	0.7420269	0.9655	0.716426972
715	0.7442953	0.97304	0.724229099
720	0.7451108	0.9793	0.729687006
725	0.7508112	0.9802	0.735945138
730	0.7498367	0.9828	0.736939509
735	0.7491706	0.98838	0.740465238
740	0.7418256	0.9931	0.736707003
745	0.7489879	0.99719	0.746883244
750	0.7544205	1	0.7544205
755	0.7551282	1	0.7551282
760	0.7551659	1	0.7551659
765	0.7540074	1	0.7540074
770	0.7495385	1	0.7495385
775	0.7518798	0.99814	0.750481304
780	0.7552493	0.9966	0.752681452
785	0.7530949	0.99543	0.749653256
790	0.7514451	0.9945	0.747312152
795	0.7534039	0.9938	0.748732796
800	0.7553784	0.9931	0.750166289
805	0.7491961	0.9862	0.738857194
810	0.7465475	0.9793	0.731093967
815	0.7476715	0.97283	0.727357265
820	0.7489289	0.9655	0.723090853
825	0.7430556	0.95515	0.709729556
830	0.7491103	0.9448	0.707759411
835	0.742674	0.93402	0.693672369
840	0.7419355	0.9241	0.685622596
845	0.7405941	0.9172	0.679272909
850	0.7300104	0.9103	0.664528467
855	0.7206522	0.86334	0.62216787
860	0.700114	0.8	0.5600912
865	0.6742789	0.72848	0.491198693
870	0.6770964	0.6552	0.443633561
875	0.7009222	0.58016	0.406647024
880	0.7191011	0.5034	0.361995494
885	0.7275449	0.42523	0.309373918
890	0.7264151	0.3448	0.250467926
895	0.722973	0.25704	0.18583298
900	0.7076648	0.175	0.12384134
905	0.693727	0.11009	0.076372405
910	0.6928983	0.0621	0.043028984
915	0.7263582	0.043125	0.031324197
920	0.7436975	0.0276	0.020526051
925	0.766147	0.015525	0.011894432
930	0.7648456	0.0069	0.005277435
935	0.7586207	0	0
940	0.7525773	0	0
945	0.7540984	0	0
950	0.7521614	0	0
<b>SUM</b>		35.98611268	
<b>T<sub>nv</sub>g(SUM/NVG)</b>		0.738956995	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

## **NEXT GENERATION TRANSPARENCY**

**Aircraft:** N/A

**Part Name:** Transparency

**Manufactured:** N/A

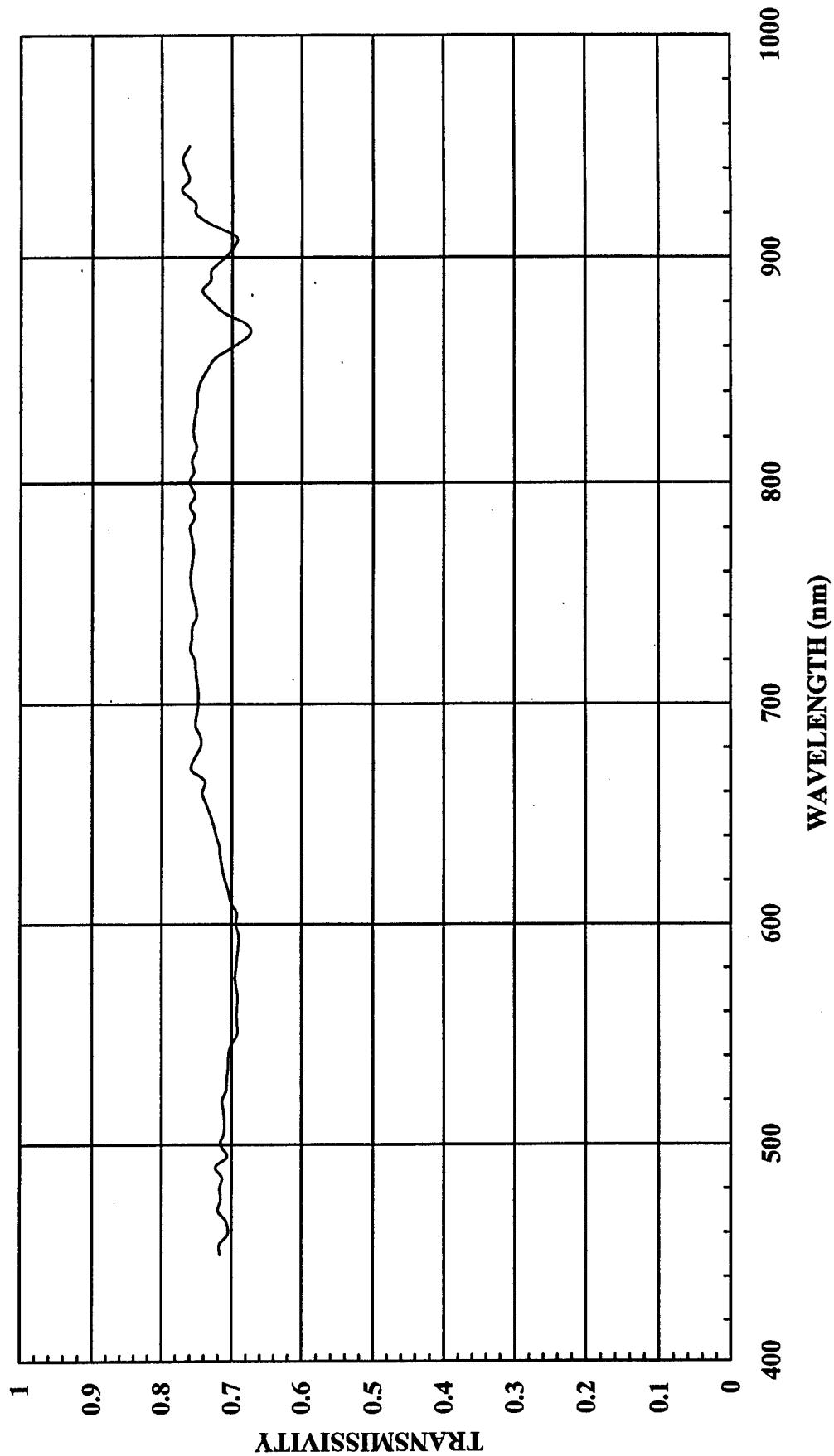
**S/N#** OEP-54D

**Material Type:** N/A

**Construction:** N/A

**Coating:** N/A

NEXT GENERATION TRANSPARENCY (S/N#OEP-54D) @ NORMAL  
 $T_{avg} = 74\%$



**NEXT GENERATION TRANSPARENCY, S/N# OEP-54D, @ NORMAL**

WAVELENGTH(nm)	<u>SPECTRA-</u> <u>RADIOMETRIC</u>	<u>RELATIVE</u> <u>SPECTRAL SENSITIVITY</u>	<u>NVG</u> <u>SPECTRAL</u>
	READING	"NVIS A"	RESPONSE
450	0.7170212	0.0001	7.17021E-05
455	0.7177419	0.0001125	8.0746E-05
460	0.7055556	0.000123	8.67833E-05
465	0.7082602	0.0001375	9.73858E-05
470	0.7197232	0.00015	0.000107958
475	0.7161716	0.00016172	0.000115819
480	0.7169811	0.000175	0.000125472
485	0.7140673	0.00019375	0.000138351
490	0.7238372	0.0002125	0.000153815
495	0.7067568	0.00022266	0.000157366
500	0.7165354	0.0002375	0.000170177
505	0.7116402	0.00027656	0.000196811
510	0.7103539	0.0003125	0.000221986
515	0.7120292	0.00034279	0.000244076
520	0.7138047	0.000375	0.000267677
525	0.708061	0.00041875	0.000296501
530	0.7070485	0.0004625	0.00032701
535	0.7052979	0.00050703	0.000357607
540	0.7051282	0.00055	0.000387821
545	0.7017189	0.00058359	0.000409516
550	0.6920115	0.000625	0.000432507
555	0.6928166	0.0007	0.000484972
560	0.6930875	0.000775	0.000537143
565	0.6916221	0.00085	0.000587879
570	0.6930352	0.000925	0.000641058
575	0.6952862	0.0014525	0.001009903
580	0.6939116	0.00198	0.001373945
585	0.6923715	0.0047175	0.003266263
590	0.6908367	0.0078	0.005388526
595	0.6901726	0.0114	0.007867968
600	0.6946779	0.015	0.010420169
605	0.6928813	0.026263	0.018197142
610	0.7007602	0.052	0.03643953
615	0.7053701	0.088388	0.062346252
620	0.7101557	0.175	0.124277248
625	0.7138599	0.43288	0.309015674
630	0.7166667	0.6138	0.43989002
635	0.7178947	0.67756	0.486416733
640	0.7225275	0.7448	0.538138482
645	0.7261825	0.82458	0.598795566
650	0.7319177	0.8897	0.651187178
655	0.7374339	0.89654	0.661138989
660	0.7427562	0.9034	0.671005951
665	0.7393364	0.91051	0.673173186
670	0.7576687	0.9172	0.694933732
675	0.7546898	0.92241	0.696133418
680	0.7451254	0.9276	0.691178321
685	0.745122	0.93254	0.69485607
690	0.7523609	0.9379	0.705639288
695	0.7511563	0.9448	0.709692472

700	0.7485761	0.9517	0.712419874
705	0.7483044	0.9586	0.717324598
710	0.7498228	0.9655	0.723953913
715	0.7516779	0.97304	0.731412664
720	0.7529335	0.9793	0.737347777
725	0.7592472	0.9802	0.744214105
730	0.7570215	0.9828	0.74400073
735	0.7564698	0.98838	0.747679621
740	0.7506812	0.9931	0.7455015
745	0.7516869	0.99719	0.74957466
750	0.7563851	1	0.7563851
755	0.7589743	1	0.7589743
760	0.7589229	1	0.7589229
765	0.7564735	1	0.7564735
770	0.7550769	1	0.7550769
775	0.7575188	0.99814	0.756109815
780	0.7604987	0.9966	0.757913004
785	0.7537827	0.99543	0.750337913
790	0.7608382	0.9945	0.75665359
795	0.7534039	0.9938	0.748732796
800	0.7609562	0.9931	0.755705602
805	0.7548231	0.9862	0.744406541
810	0.7579203	0.9793	0.74223135
815	0.7510584	0.97283	0.730652143
820	0.7549272	0.9655	0.728882212
825	0.7552083	0.95515	0.721337208
830	0.752669	0.9448	0.711121671
835	0.75	0.93402	0.700515
840	0.7495256	0.9241	0.692636607
845	0.7455446	0.9172	0.683813507
850	0.7352024	0.9103	0.669254745
855	0.725	0.86334	0.6259215
860	0.700114	0.8	0.5600912
865	0.6754807	0.72848	0.49207418
870	0.6795995	0.6552	0.445273592
875	0.7101449	0.58016	0.411997665
880	0.730337	0.5034	0.367651646
885	0.7425149	0.42523	0.315739611
890	0.731132	0.3448	0.252094314
895	0.7297297	0.25704	0.187569722
900	0.7094474	0.175	0.124153295
905	0.697417	0.11009	0.076778638
910	0.6948177	0.0621	0.043148179
915	0.7323944	0.043125	0.031584509
920	0.7521008	0.0276	0.020757982
925	0.752784	0.015525	0.011686972
930	0.7719715	0.0069	0.005326603
935	0.7610837	0	0
940	0.7654639	0	0
945	0.7704918	0	0
950	0.760807	0	0
<b>SUM</b>		36.25989562	
<b>T<sub>nvg</sub>(SUM/NVG)</b>		0.744578992	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **PROTOTYPE**

**Aircraft:** N/A

**Part Name:** Prototype, BOEING

**Manufactured:** N/A

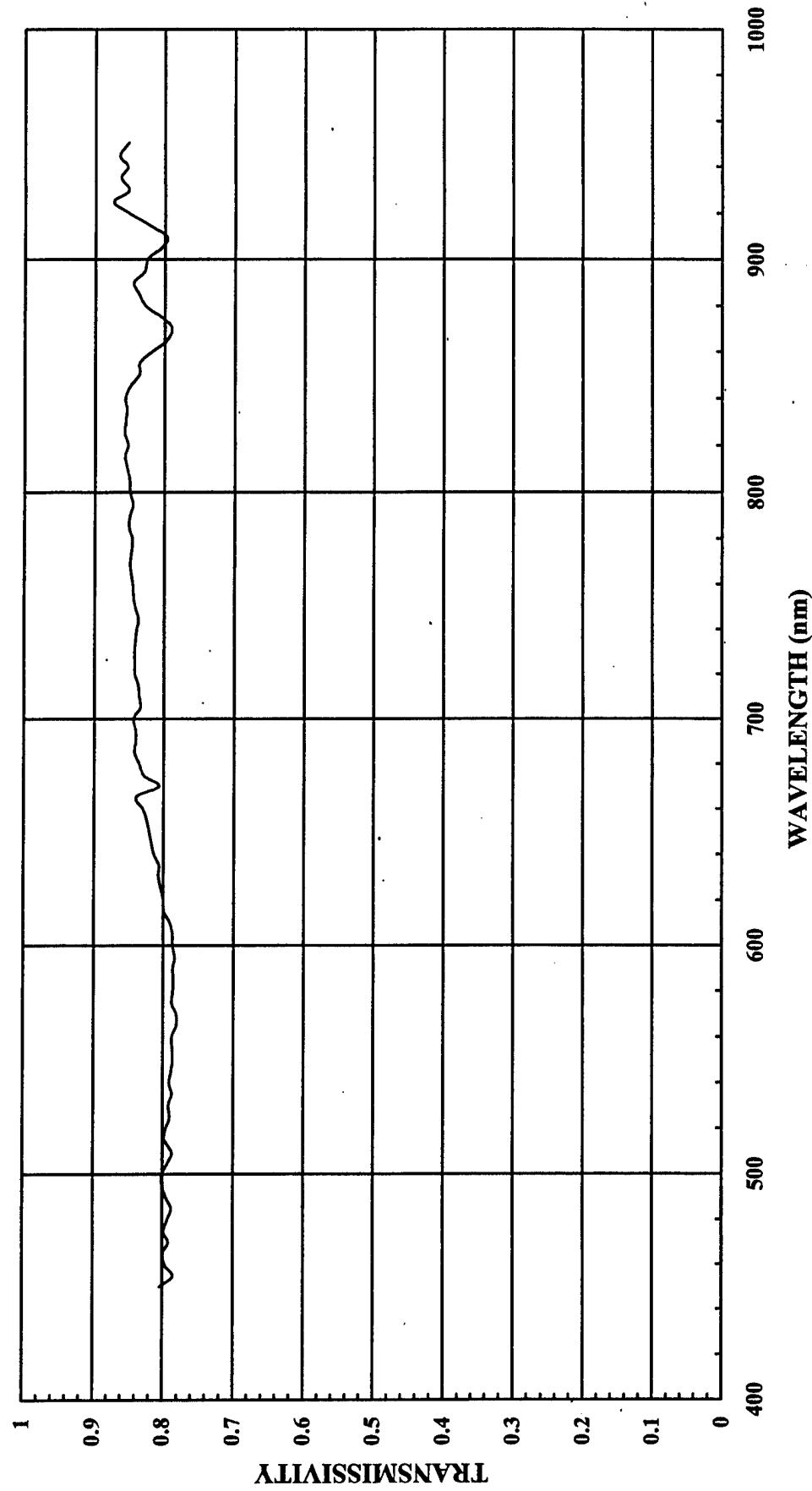
**S/N#** CFT-129

**Material Type:** N/A

**Construction:** Injection-molded

**Coating:** N/A

PROTOTYPE WINDSCREEN (BOEING, INJECTION-MOLDED, ID# CFT - 129)  
@ NORMAL  
 $T_{vug} = 84\%$



PROTOTYPE WINDSCREEN, BOEING, S/N# CFT-129 @ NORMAL			
WAVELENGTH(nm)	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
	READING	"NVIS A"	
450	0.804	0.0001	0.0000804
455	0.7857143	0.0001125	8.83929E-05
460	0.7964602	0.000123	9.79646E-05
465	0.7996661	0.0001375	0.000109954
470	0.7922078	0.00015	0.000118831
475	0.7984375	0.00016172	0.000129123
480	0.7928465	0.000175	0.000138748
485	0.7878788	0.00019375	0.000152652
490	0.7950482	0.0002125	0.000168948
495	0.801027	0.00022266	0.000178357
500	0.8009951	0.0002375	0.000190236
505	0.7932752	0.00027656	0.000219388
510	0.7871287	0.0003125	0.000245978
515	0.7978849	0.00034279	0.000273507
520	0.7960954	0.000375	0.000298536
525	0.7907217	0.00041875	0.000331115
530	0.7920998	0.0004625	0.000366346
535	0.7875	0.00050703	0.000399286
540	0.7911975	0.00055	0.000435159
545	0.7884616	0.00058359	0.000460138
550	0.7867035	0.000625	0.00049169
555	0.7871957	0.0007	0.000551037
560	0.7877442	0.000775	0.000610502
565	0.7813835	0.00085	0.000664176
570	0.7819984	0.000925	0.000723349
575	0.7879032	0.0014525	0.001144429
580	0.7865079	0.00198	0.001557286
585	0.7858843	0.0047175	0.003707409
590	0.7865947	0.0078	0.006135439
595	0.7839416	0.0114	0.008936934
600	0.7869742	0.015	0.011804613
605	0.7872063	0.026263	0.020674399
610	0.7904388	0.052	0.041102818
615	0.799591	0.088388	0.070674249
620	0.8	0.175	0.14
625	0.8035461	0.43288	0.347839036
630	0.8073459	0.6138	0.495548913
635	0.8067567	0.67756	0.54662607
640	0.8135259	0.7448	0.60591409
645	0.8173691	0.82458	0.673986212
650	0.8206591	0.8897	0.730140401
655	0.8241895	0.89654	0.738918854
660	0.8291055	0.9034	0.749013909
665	0.839233	0.91051	0.764130039
670	0.8066038	0.9172	0.739817005
675	0.8284884	0.92241	0.764205985
680	0.8358209	0.9276	0.775307467
685	0.8423645	0.93254	0.785538591
690	0.8404146	0.9379	0.788224853

695	0.8404351	0.9448	0.794043082
700	0.8434022	0.9517	0.802665874
705	0.8338193	0.9586	0.799299181
710	0.8354949	0.9655	0.806670326
715	0.8370895	0.97304	0.814521567
720	0.8419415	0.9793	0.824513311
725	0.8416207	0.9802	0.82495661
730	0.8420073	0.9828	0.827524774
735	0.8411507	0.98838	0.831376529
740	0.8395061	0.9931	0.833713508
745	0.8367742	0.99719	0.834422864
750	0.8416459	1	0.8416459
755	0.8440367	1	0.8440367
760	0.8449612	1	0.8449612
765	0.8480048	1	0.8480048
770	0.8486612	1	0.8486612
775	0.8469267	0.99814	0.845351416
780	0.8457317	0.9966	0.842856212
785	0.8506117	0.99543	0.846724405
790	0.8494915	0.9945	0.844819297
795	0.8453901	0.9938	0.840148681
800	0.8493661	0.9931	0.843505474
805	0.8498476	0.9862	0.838119703
810	0.8529862	0.9793	0.835329386
815	0.8566827	0.97283	0.833406631
820	0.8522727	0.9655	0.822869292
825	0.8569065	0.95515	0.818474243
830	0.8559393	0.9448	0.808691451
835	0.8540399	0.93402	0.797690347
840	0.8564981	0.9241	0.791489894
845	0.8501873	0.9172	0.779791792
850	0.8361138	0.9103	0.761114392
855	0.8360655	0.86334	0.721808789
860	0.8191604	0.8	0.65532832
865	0.7981962	0.72848	0.581469968
870	0.7900355	0.6552	0.51763126
875	0.8039702	0.58016	0.466431351
880	0.8269987	0.5034	0.416311146
885	0.837535	0.42523	0.356145008
890	0.8443114	0.3448	0.291118571
895	0.8293839	0.25704	0.213184838
900	0.8243244	0.175	0.14425677
905	0.8052631	0.11009	0.088651415
910	0.7974452	0.0621	0.049521347
915	0.8212928	0.043125	0.035418252
920	0.8528226	0.0276	0.023537904
925	0.8736842	0.015525	0.013563947
930	0.8521739	0.0069	0.00588
935	0.8628841	0	0
940	0.8533654	0	0
945	0.8647959	0	0
950	0.851752	0	0
<b>SUM:</b>		40.77013174	
<b>T<sub>nv</sub>g(SUM/NVG):</b>		0.837194457	(SPECTRAL TRANSMISSION COEFFICIENT)

## **COUPONS/PLASTIC SAMPLES**

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - Pilkington

**Manufactured:** N/A

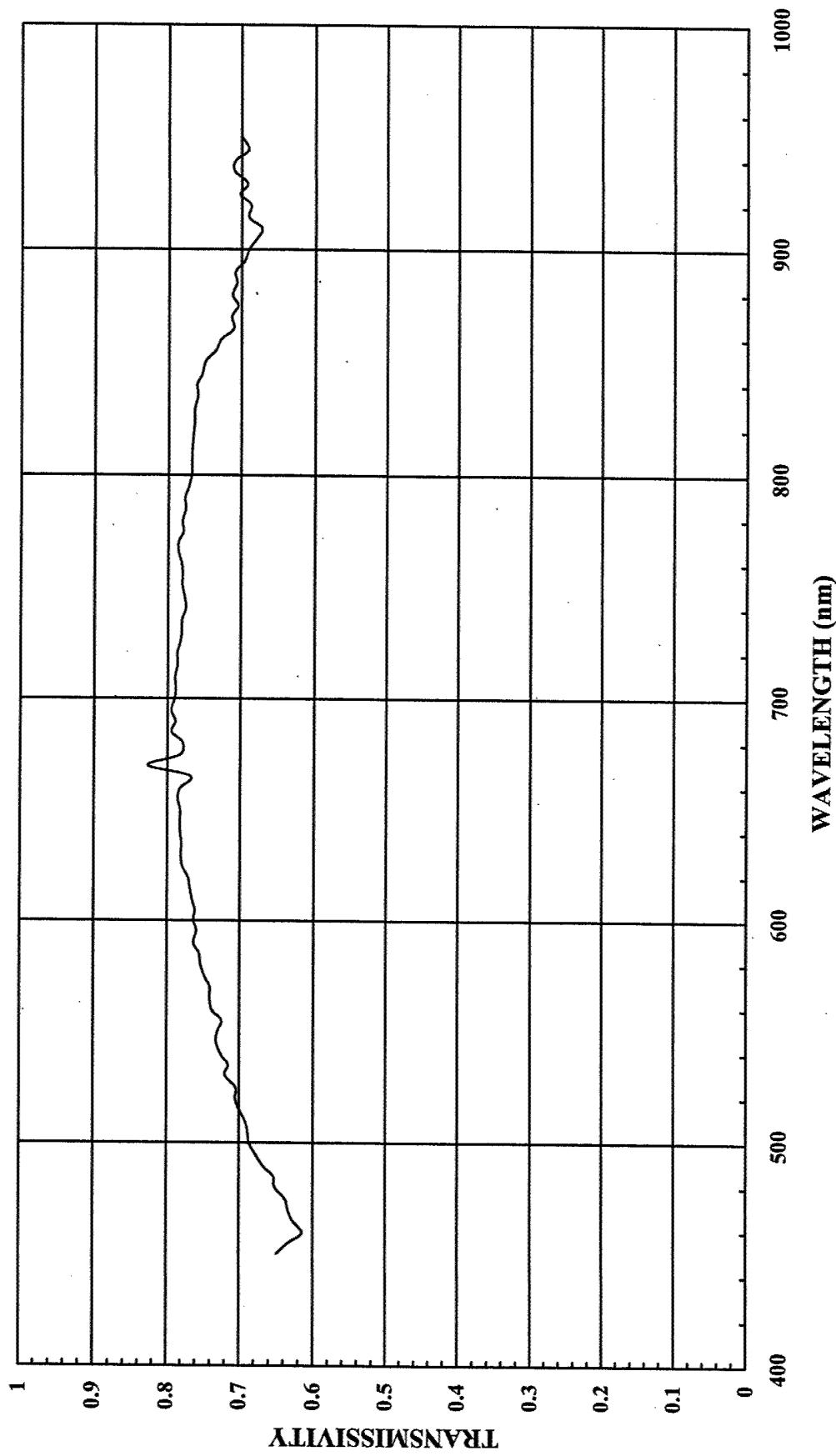
**S/N#** S-21 @ 20 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (PILKINGTON, GOLD COAT, SOLAR, S/N# S-21) @ 20 DEGREES  
T<sub>avg</sub> = 77%



**COUPON, PILKINGTON, GOLD COAT, SOLAR, S/N# S-21 @ 20 DEG**

	<u>SPECTRA-</u> <u>RADIOMETRIC</u>	<u>RELATIVE</u> <u>SPECTRAL SENSITIVITY</u>	<u>NVG</u> <u>SPECTRAL</u>
<u>WAVELENGTH(nm)</u>	<u>READING</u>	<u>"NVIS A"</u>	<u>RESPONSE</u>
450	0.6495327	0.0001	6.49533E-05
455	0.6341463	0.0001125	7.13415E-05
460	0.6146045	0.000123	7.55964E-05
465	0.6278626	0.0001375	8.63311E-05
470	0.6340111	0.00015	9.51017E-05
475	0.6376554	0.00016172	0.000103122
480	0.6519524	0.000175	0.000114092
485	0.6535304	0.00019375	0.000126622
490	0.6682243	0.0002125	0.000141998
495	0.6791908	0.00022266	0.000151229
500	0.6865465	0.0002375	0.000163055
505	0.6883656	0.00027656	0.000190374
510	0.6916667	0.0003125	0.000216146
515	0.7002618	0.00034279	0.000240043
520	0.7054546	0.000375	0.000264545
525	0.7046751	0.00041875	0.000295083
530	0.7195402	0.0004625	0.000332787
535	0.7154378	0.00050703	0.000362748
540	0.7259343	0.00055	0.000399264
545	0.7321998	0.00058359	0.000427304
550	0.7300303	0.000625	0.000456269
555	0.7248521	0.0007	0.000507396
560	0.737911	0.000775	0.000571881
565	0.7411215	0.00085	0.000629953
570	0.7405405	0.000925	0.000685
575	0.7478108	0.0014525	0.001086195
580	0.7534602	0.00198	0.001491851
585	0.7549441	0.0047175	0.003561449
590	0.7630252	0.0078	0.005951597
595	0.7592157	0.0114	0.008655059
600	0.7628866	0.015	0.011443299
605	0.7610993	0.026263	0.019988751
610	0.765371	0.052	0.039799292
615	0.7684982	0.088388	0.067926019
620	0.7710387	0.175	0.134931773
625	0.7788018	0.43288	0.337127723
630	0.7808735	0.6138	0.479300154
635	0.7799708	0.67756	0.528477015
640	0.7817796	0.7448	0.582269446
645	0.7821918	0.82458	0.644979714
650	0.7819294	0.8897	0.695682587
655	0.7849462	0.89654	0.703735666
660	0.7825465	0.9034	0.706952508
665	0.7679517	0.91051	0.699227702
670	0.827381	0.9172	0.758873853
675	0.7828125	0.92241	0.722074078
680	0.7789018	0.9276	0.72250931
685	0.7944297	0.93254	0.740837472
690	0.7890625	0.9379	0.740061719
695	0.7947214	0.9448	0.750852779
700	0.7901861	0.9517	0.752020111
705	0.7885669	0.9586	0.75592023
710	0.7896275	0.9655	0.762385351
715	0.7860082	0.97304	0.764817419
720	0.7868526	0.9793	0.770564751

725	0.783093	0.9802	0.767587759
730	0.7807769	0.9828	0.767347537
735	0.780278	0.98838	0.77121117
740	0.7751885	0.9931	0.769839699
745	0.776262	0.99719	0.774080704
750	0.7801325	1	0.7801325
755	0.7797927	1	0.7797927
760	0.780796	1	0.780796
765	0.7854477	1	0.7854477
770	0.7855822	1	0.7855822
775	0.778607	0.99814	0.777158791
780	0.7799228	0.9966	0.777271062
785	0.7758152	0.99543	0.772269725
790	0.7768241	0.9945	0.772551567
795	0.7717066	0.9938	0.766922019
800	0.7676609	0.9931	0.76236404
805	0.7673107	0.9862	0.756721812
810	0.7670454	0.9793	0.75116756
815	0.7661017	0.97283	0.745286717
820	0.7647562	0.9655	0.738372111
825	0.7638888	0.95515	0.729628387
830	0.7636204	0.9448	0.721468554
835	0.7593437	0.93402	0.709242203
840	0.7608696	0.9241	0.703119597
845	0.7536657	0.9172	0.69126218
850	0.7489712	0.9103	0.681788483
855	0.7350427	0.86334	0.634591765
860	0.728395	0.8	0.582716
865	0.7109283	0.72848	0.517897048
870	0.7135741	0.6552	0.46753375
875	0.7046632	0.58016	0.408817402
880	0.7123474	0.5034	0.358595681
885	0.7067448	0.42523	0.300529091
890	0.7087228	0.3448	0.244367621
895	0.6960784	0.25704	0.178919992
900	0.6894737	0.175	0.120657898
905	0.6793478	0.11009	0.074789399
910	0.6729679	0.0621	0.041791307
915	0.6903353	0.043125	0.02977071
920	0.6875	0.0276	0.018975
925	0.7021739	0.015525	0.01090125
930	0.6924829	0.0069	0.004778132
935	0.7100737	0	0
940	0.7081218	0	0
945	0.6904762	0	0
950	0.7002801	0	0
<b>SUM:</b>	<b>37.53432193</b>		
<b>Tnvg(SUM/NVG):</b>	<b>0.770748705</b>	<b>(SPECTRAL</b>	
		<b>TRANSMISSION</b>	
		<b>COEFFICIENT)</b>	

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - SIERRACIN

**Manufactured:** N/A

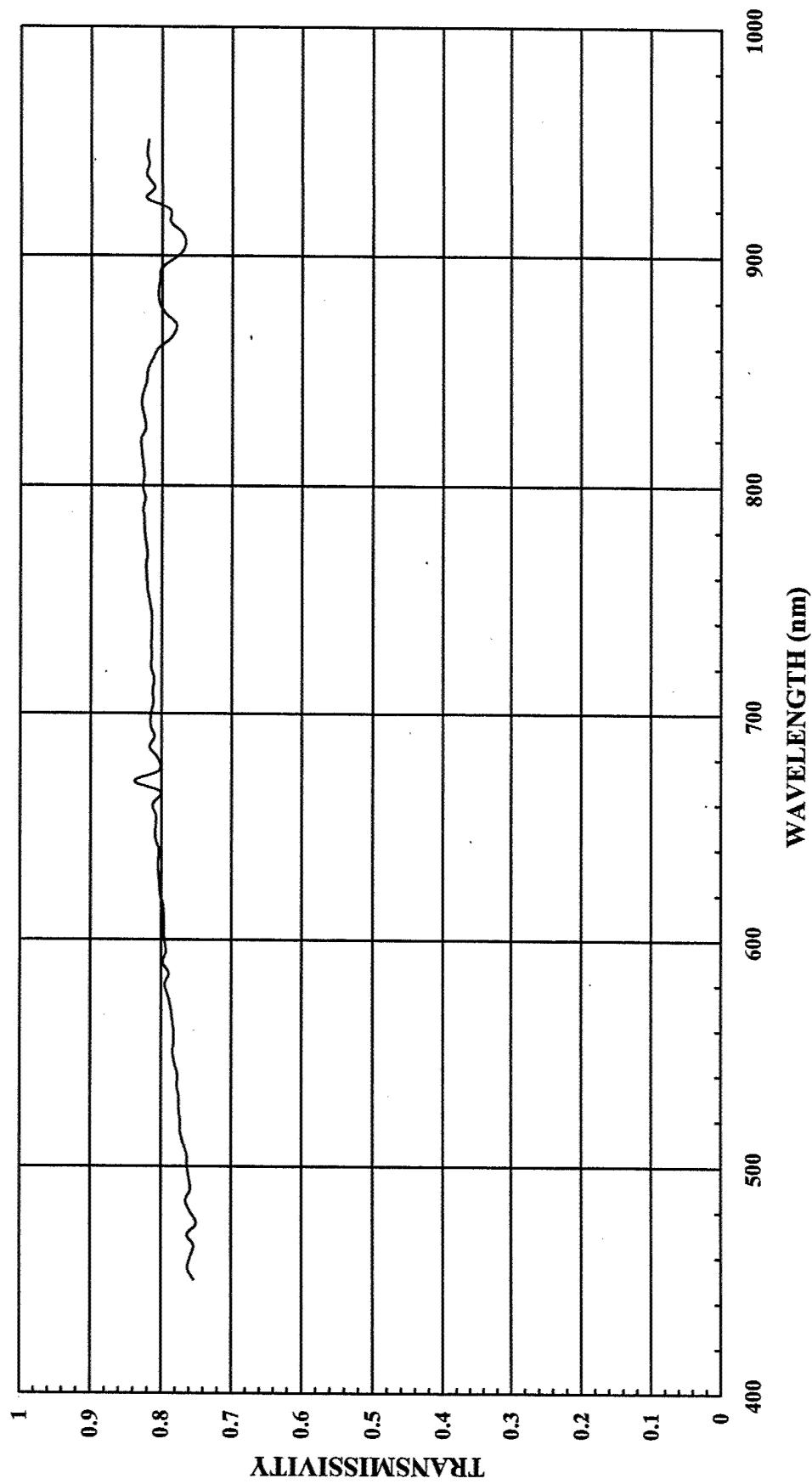
**S/N#** S-16 @ 20 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (SIERRACIN, GOLD COAT, SOLAR, S/N# S-16) @  
20 DEGREES  
T<sub>avg</sub> = 82%



<b>COUPON, SIERRACIN, GOLD COAT, SOLAR, S/N# S-16 @ 20 DEG</b>			
	<b>SPECTRA- RADIOMETRIC</b>	<b>RELATIVE SPECTRAL SENSITIVITY</b>	<b>NVG SPECTRAL RESPONSE</b>
<b>WAVELENGTH(nm)</b>	<b>READING</b>	<b>"NVIS A"</b>	
450	0.7533718	0.0001	7.53372E-05
455	0.7619047	0.0001125	8.57143E-05
460	0.7589134	0.000123	9.33463E-05
465	0.7535545	0.0001375	0.000103614
470	0.7627907	0.00015	0.000114419
475	0.7496274	0.00016172	0.00012123
480	0.7592593	0.000175	0.00013287
485	0.7648687	0.00019375	0.000148193
490	0.7581699	0.0002125	0.000161111
495	0.7603912	0.00022266	0.000169309
500	0.7625731	0.0002375	0.000181111
505	0.7632509	0.00027656	0.000211085
510	0.7679623	0.0003125	0.000239988
515	0.7729306	0.00034279	0.000264953
520	0.7728674	0.000375	0.000289825
525	0.774951	0.00041875	0.000324511
530	0.7748279	0.0004625	0.000358358
535	0.777668	0.00050703	0.000394301
540	0.7769156	0.00055	0.000427304
545	0.7815356	0.00058359	0.000456096
550	0.7838313	0.000625	0.000489895
555	0.7821276	0.0007	0.000547489
560	0.7827181	0.000775	0.000606607
565	0.7849636	0.00085	0.000667219
570	0.7868339	0.000925	0.000727821
575	0.7902365	0.0014525	0.001147819
580	0.7951808	0.00198	0.001574458
585	0.7895131	0.0047175	0.003724528
590	0.7983871	0.0078	0.006227419
595	0.7936288	0.0114	0.009047368
600	0.7958789	0.015	0.011938184
605	0.7964109	0.026263	0.020916139
610	0.796798	0.052	0.041433496
615	0.7978177	0.088388	0.070517511
620	0.802	0.175	0.14035
625	0.8028264	0.43288	0.347527492
630	0.8048942	0.6138	0.49404406
635	0.8048937	0.67756	0.545363775
640	0.8034934	0.7448	0.598441884
645	0.8090024	0.82458	0.667087199
650	0.8085234	0.8897	0.719343269
655	0.8080569	0.89654	0.724455333
660	0.8126583	0.9034	0.734155508
665	0.801636	0.91051	0.729897594
670	0.8382353	0.9172	0.768829417
675	0.8035961	0.92241	0.741245079
680	0.8059509	0.9276	0.747600055
685	0.8175356	0.93254	0.762384648
690	0.8103277	0.9379	0.76000635
695	0.8159722	0.9448	0.770930535
700	0.8153495	0.9517	0.775968119
705	0.8121508	0.9586	0.778527757
710	0.8132726	0.9655	0.785214695
715	0.8112745	0.97304	0.789402539
720	0.8153206	0.9793	0.798443464

725	0.8147714	0.9802	0.798638926
730	0.8151854	0.9828	0.801164211
735	0.8146167	0.98838	0.805150854
740	0.8143122	0.9931	0.808693446
745	0.8148832	0.99719	0.812593378
750	0.8179655	1	0.8179655
755	0.8207822	1	0.8207822
760	0.8215507	1	0.8215507
765	0.8227069	1	0.8227069
770	0.8206552	1	0.8206552
775	0.8226352	0.99814	0.821105099
780	0.8246943	0.9966	0.821890339
785	0.8251534	0.99543	0.821382449
790	0.8270725	0.9945	0.822523601
795	0.8238482	0.9938	0.818740341
799	0.8275618	0.9931	0.821851624
805	0.8252003	0.9862	0.813812536
810	0.8273329	0.9793	0.810207109
815	0.8292308	0.97283	0.806700599
820	0.8299533	0.9655	0.801319911
825	0.823483	0.95515	0.786549787
830	0.8253205	0.9448	0.779762808
835	0.8291667	0.93402	0.774458281
840	0.8277347	0.9241	0.764909636
845	0.8227395	0.9172	0.754616669
850	0.8206573	0.9103	0.74704434
855	0.8137255	0.86334	0.702521773
860	0.8053278	0.8	0.64426224
865	0.7868676	0.72848	0.573217309
870	0.7797957	0.6552	0.510922143
875	0.7956989	0.58016	0.461632674
880	0.8044832	0.5034	0.404976843
885	0.8053691	0.42523	0.342467102
890	0.8028572	0.3448	0.276825163
895	0.8006042	0.25704	0.205787304
900	0.775641	0.175	0.135737175
905	0.7666667	0.11009	0.084402337
910	0.770979	0.0621	0.047877796
915	0.7879342	0.043125	0.033979662
920	0.7893738	0.0276	0.021786717
925	0.8223553	0.015525	0.012767066
930	0.8113208	0.0069	0.005598114
935	0.8218263	0	0
940	0.8190255	0	0
945	0.8215159	0	0
950	0.8191215	0	0
<b>SUM:</b>		39.71467526	
<b>Tnvg(SUM/NVG):</b>		0.815521181	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - TEXSTARS

**Manufactured:** N/A

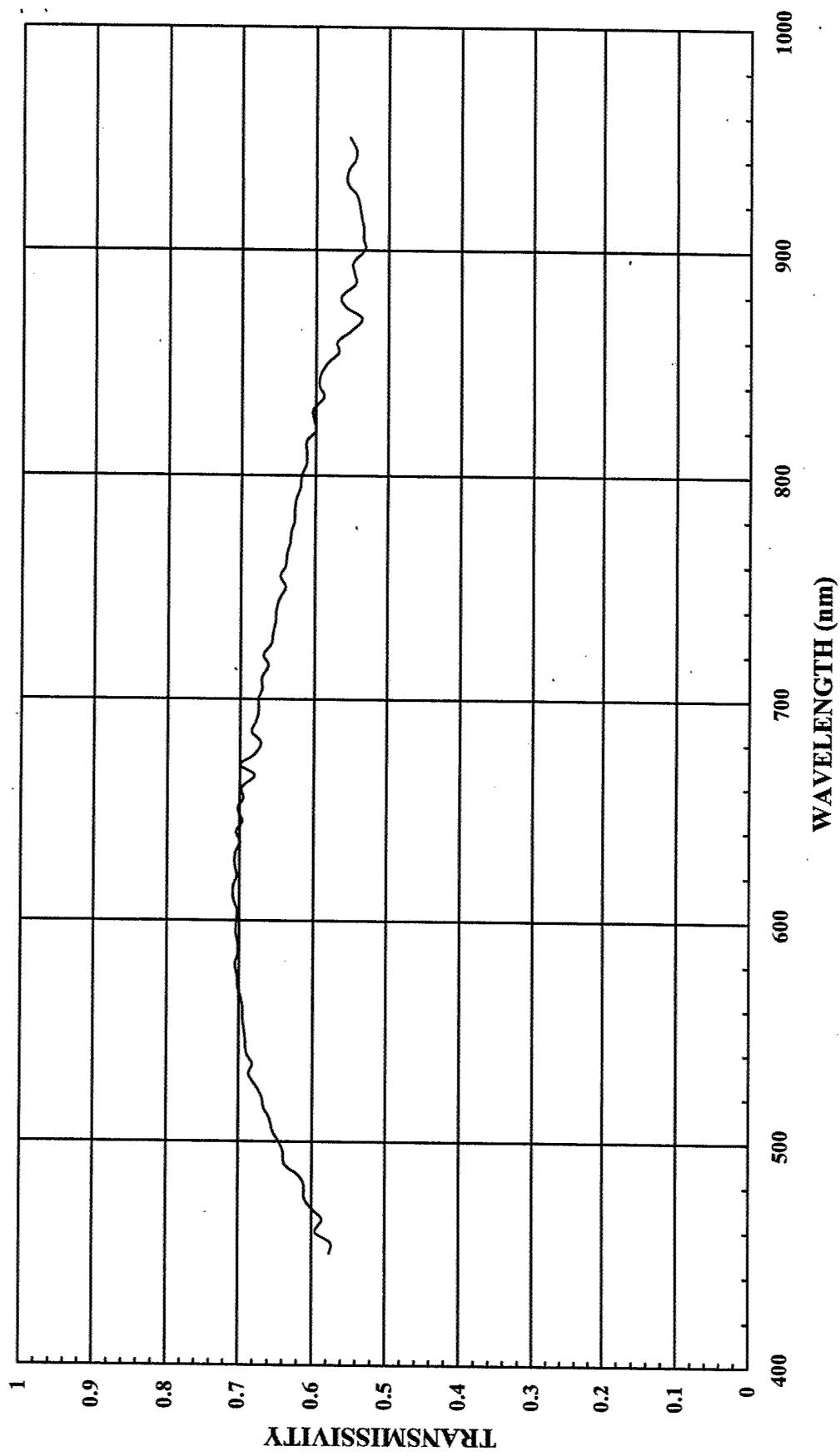
**S/N#** S-15 @ 20 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (TEXSTARS, GOLD COAT, SOLAR, S/N# S-15) @ 20 DEGREES  
 $T_{avg} = 64\%$



<b>COUPON, TEXSTARS, GOLD COAT, SOLAR, S/N# S-15 @ 20 DEGREES</b>			
	<b>SPECTRA- RADIOMETRIC</b>	<b>RELATIVE SPECTRAL SENSITIVITY</b>	<b>NVG SPECTRAL RESPONSE</b>
<b>WAVELENGTH(nm)</b>	<b>READING</b>	<b>"NVIS A"</b>	
450	0.5758293	0.0001	5.75829E-05
455	0.5739911	0.0001125	6.4574E-05
460	0.5954357	0.000123	7.32386E-05
465	0.5860735	0.0001375	8.05851E-05
470	0.6	0.00015	0.00009
475	0.6104129	0.00016172	9.8716E-05
480	0.6108291	0.000175	0.000106895
485	0.618421	0.00019375	0.000119819
490	0.6370716	0.0002125	0.000135378
495	0.6392496	0.00022266	0.000142335
500	0.6453408	0.0002375	0.000153268
505	0.6536313	0.00027656	0.000180768
510	0.657931	0.0003125	0.000205603
515	0.6662338	0.00034279	0.000228378
520	0.6686674	0.000375	0.00025075
525	0.675768	0.00041875	0.000282978
530	0.6866359	0.0004625	0.000317569
535	0.6820277	0.00050703	0.000345809
540	0.6895388	0.00055	0.000379246
545	0.691254	0.00058359	0.000403409
550	0.6930091	0.000625	0.000433131
555	0.6951819	0.0007	0.000486627
560	0.694899	0.000775	0.000538547
565	0.6978684	0.00085	0.000593188
570	0.7019749	0.000925	0.000649327
575	0.7025372	0.0014525	0.001020435
580	0.7060345	0.00198	0.001397948
585	0.7019641	0.0047175	0.003311516
590	0.7018272	0.0078	0.005474252
595	0.7048666	0.0114	0.008035479
600	0.7040816	0.015	0.010561224
605	0.7034194	0.026263	0.018473904
610	0.7083626	0.052	0.036834855
615	0.7087592	0.088388	0.062645808
620	0.7036199	0.175	0.123133483
625	0.7064639	0.43288	0.305814093
630	0.7058823	0.6138	0.433270556
635	0.6994219	0.67756	0.473900303
640	0.7048951	0.7448	0.52500587
645	0.6967213	0.82458	0.57450245
650	0.7029034	0.8897	0.625373155
655	0.6952192	0.89654	0.623291822
660	0.697724	0.9034	0.630323862
665	0.6806597	0.91051	0.619747463
670	0.7	0.9172	0.64204
675	0.680916	0.92241	0.628083728
680	0.6723164	0.9276	0.623640693
685	0.6844156	0.93254	0.638244924
690	0.6791209	0.9379	0.636947492
695	0.6755981	0.9448	0.638305085
700	0.6758794	0.9517	0.643234425
705	0.6707882	0.9586	0.643017569
710	0.6714594	0.9655	0.648294051
715	0.6628222	0.97304	0.644952513
720	0.6692965	0.9793	0.655442062

725	0.6588845	0.9802	0.645838587
730	0.656697	0.9828	0.645401812
735	0.6531148	0.98838	0.645525606
740	0.6522033	0.9931	0.647703097
745	0.648685	0.99719	0.646862195
750	0.6397394	1	0.6397394
755	0.646833	1	0.646833
760	0.6397749	1	0.6397749
765	0.6378677	1	0.6378677
770	0.6335554	1	0.6335554
775	0.6324892	0.99814	0.63131277
780	0.6280255	0.9966	0.625890213
785	0.6277816	0.99543	0.624912638
790	0.6257102	0.9945	0.622268794
795	0.6205357	0.9938	0.616688379
800	0.61875	0.9931	0.614480625
805	0.6124402	0.9862	0.603988525
810	0.6119162	0.9793	0.599249535
815	0.6120906	0.97283	0.595460098
820	0.5998294	0.9655	0.579135286
825	0.6024096	0.95515	0.575391529
830	0.6034935	0.9448	0.570180659
835	0.5888188	0.93402	0.549968536
840	0.5953051	0.9241	0.550121443
845	0.593963	0.9172	0.544782864
850	0.5834186	0.9103	0.531085952
855	0.5686901	0.86334	0.490972911
860	0.5704697	0.8	0.45637576
865	0.5516432	0.72848	0.401861038
870	0.5363749	0.6552	0.351432834
875	0.5581396	0.58016	0.32381027
880	0.5649795	0.5034	0.28441068
885	0.5454545	0.42523	0.231943617
890	0.5474339	0.3448	0.188755209
895	0.5490196	0.25704	0.141119998
900	0.5323993	0.175	0.093169878
905	0.5346715	0.11009	0.058861985
910	0.5343512	0.0621	0.03318321
915	0.5375494	0.043125	0.023181818
920	0.5403727	0.0276	0.014914287
925	0.5450644	0.015525	0.008462125
930	0.5573394	0.0069	0.003845642
935	0.5560976	0	0
940	0.5465995	0	0
945	0.5447369	0	0
950	0.5539773	0	0
<b>SUM</b>		31.10105954	
<b>Tnvg(SUM/NVG)</b>		0.638644849	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - PILKINGTON

**Manufactured:** N/A

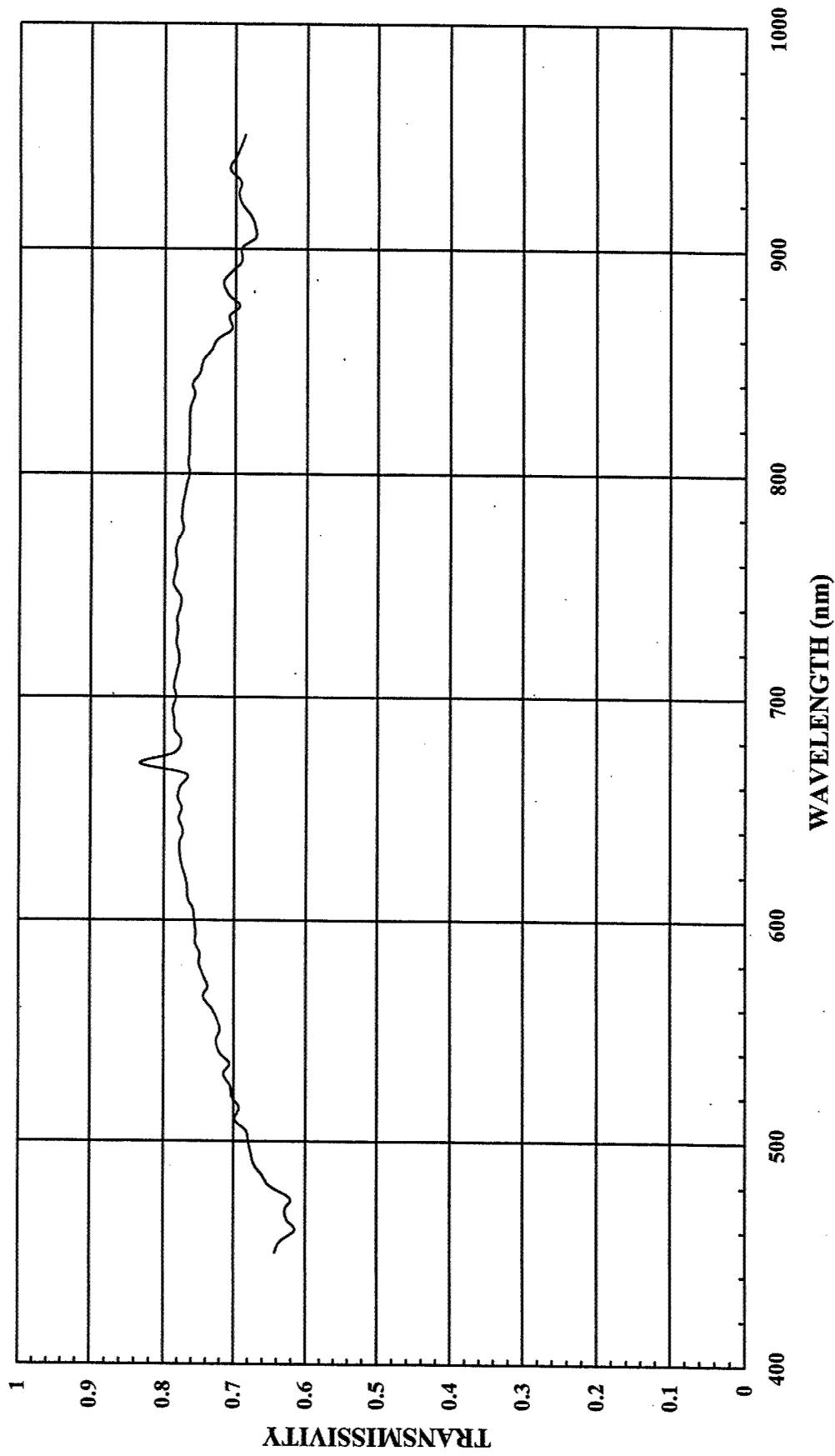
**S/N#** S-21 @ 25 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (PILKINGTON, GOLD COAT, SOLAR, S/N#S-21) @ 25 DEGREES  
 $T_{avg} = 77\%$



COUPON, PILKINGTON, GOLD COAT, SOLAR, S/N# S-21 @ 25 DEG			
	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
WAVELENGTH(nm)	READING	"NVIS A"	
450	0.6425234	0.0001	6.42523E-05
455	0.6363636	0.0001125	7.15909E-05
460	0.6152304	0.000123	7.56733E-05
465	0.6259542	0.0001375	8.60687E-05
470	0.6284658	0.00015	9.42699E-05
475	0.6216697	0.00016172	0.000100536
480	0.6502547	0.000175	0.000113795
485	0.6600986	0.00019375	0.000127894
490	0.6713396	0.0002125	0.00014266
495	0.6763005	0.00022266	0.000150585
500	0.6796116	0.0002375	0.000161408
505	0.6828254	0.00027656	0.000188842
510	0.6986111	0.0003125	0.000218316
515	0.6924084	0.00034279	0.000237351
520	0.7030303	0.000375	0.000263636
525	0.7046751	0.00041875	0.000295083
530	0.7149425	0.0004625	0.000330661
535	0.7062212	0.00050703	0.000358075
540	0.7202718	0.00055	0.000396149
545	0.7258236	0.00058359	0.000423583
550	0.7199191	0.000625	0.000449949
555	0.7238659	0.0007	0.000506706
560	0.7311412	0.000775	0.000566634
565	0.7439253	0.00085	0.000632337
570	0.7378378	0.000925	0.0006825
575	0.7434326	0.0014525	0.001079836
580	0.75	0.00198	0.001485
585	0.7489252	0.0047175	0.003533055
590	0.7554622	0.0078	0.005892605
595	0.7547619	0.0114	0.008604286
600	0.7569956	0.015	0.011354934
605	0.7582805	0.026263	0.019914721
610	0.7660778	0.052	0.039836046
615	0.767033	0.088388	0.067796513
620	0.7702805	0.175	0.134799088
625	0.7749615	0.43288	0.335465334
630	0.7778614	0.6138	0.477451327
635	0.7777778	0.67756	0.526991126
640	0.7733051	0.7448	0.575957638
645	0.779452	0.82458	0.64272053
650	0.7751359	0.8897	0.68963841
655	0.7809139	0.89654	0.700120548
660	0.7775393	0.9034	0.702429004
665	0.7687075	0.91051	0.699915866
670	0.8333334	0.9172	0.764333394
675	0.7859375	0.92241	0.724956609
680	0.7760116	0.9276	0.71982836
685	0.7851458	0.93254	0.732179864
690	0.7857143	0.9379	0.736921442
695	0.7878788	0.9448	0.74438789
700	0.7834179	0.9517	0.745578815
705	0.7862177	0.9586	0.753668287
710	0.7837838	0.9655	0.756743259
715	0.7791495	0.97304	0.758143629
720	0.7795485	0.9793	0.763411846
725	0.783093	0.9802	0.767587759

730	0.7806324	0.9828	0.767205523
735	0.7822634	0.98838	0.773173499
740	0.7779301	0.9931	0.772562382
745	0.7769441	0.99719	0.774760887
750	0.7874172	1	0.7874172
755	0.7856218	1	0.7856218
760	0.7826911	1	0.7826911
765	0.7842039	1	0.7842039
770	0.7812693	1	0.7812693
775	0.7736318	0.99814	0.772192845
780	0.7760618	0.9966	0.77342319
785	0.7751359	0.99543	0.771593529
790	0.7725322	0.9945	0.768283273
795	0.7694611	0.9938	0.764690441
800	0.7653061	0.9931	0.760025488
805	0.7673107	0.9862	0.756721812
810	0.765422	0.9793	0.749577765
815	0.7652543	0.97283	0.744462341
820	0.7647562	0.9655	0.738372111
825	0.7647569	0.95515	0.730457553
830	0.7636204	0.9448	0.721468554
835	0.7575206	0.93402	0.707539391
840	0.7608696	0.9241	0.703119597
845	0.7507331	0.9172	0.688572399
850	0.7458848	0.9103	0.678978933
855	0.7339743	0.86334	0.633669372
860	0.7261504	0.8	0.58092032
865	0.7050529	0.72848	0.513616937
870	0.7085928	0.6552	0.464270003
875	0.6943005	0.58016	0.402805378
880	0.7096336	0.5034	0.357229554
885	0.7170088	0.42523	0.304893652
890	0.7056075	0.3448	0.243293466
895	0.6911764	0.25704	0.177659982
900	0.691228	0.175	0.1209649
905	0.6721015	0.11009	0.073991654
910	0.6729679	0.0621	0.041791307
915	0.678501	0.043125	0.029260356
920	0.6916667	0.0276	0.019090001
925	0.6956522	0.015525	0.0108
930	0.6924829	0.0069	0.004778132
935	0.7076166	0	0
940	0.7005076	0	0
945	0.6931217	0	0
950	0.6862745	0	0
<b>SUM:</b>		37.43688541	
<b>T<sub>nv</sub>g(SUM/NVG):</b>		0.768747894	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - SIERRACIN

**Manufactured:** N/A

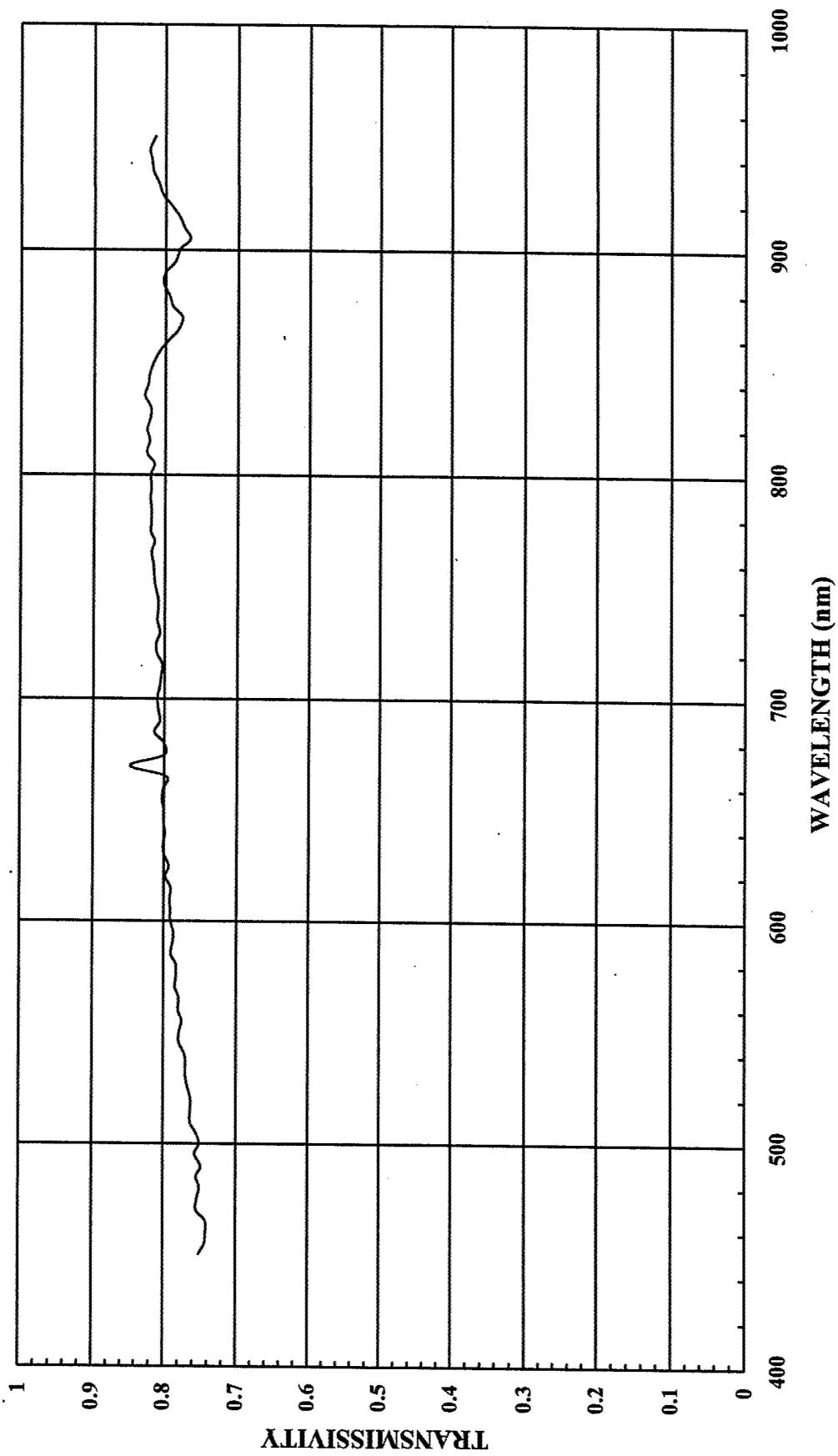
**S/N#** S-16 @ 25 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (SIERRACIN, GOLD COAT, SOLAR, S/N# S-16) @ 25 DEGREES  
 $T_{avg} = 81\%$



**COUPON, SIERRACIN, GOLD COAT, SOLAR, S/N# S-16 @ 25 DEG**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
	READING	"INVIS A"	RESPONSE
450	0.7514451	0.0001	7.51445E-05
455	0.7435897	0.0001125	8.36538E-05
460	0.7419356	0.000123	9.12581E-05
465	0.7424961	0.0001375	0.000102093
470	0.7550388	0.00015	0.000113256
475	0.7540984	0.00016172	0.000121953
480	0.7507123	0.000175	0.000131375
485	0.7551867	0.00019375	0.000146317
490	0.7490196	0.0002125	0.000159167
495	0.7567237	0.00022266	0.000168492
500	0.7508772	0.0002375	0.000178333
505	0.7550059	0.00027656	0.000208804
510	0.7632509	0.0003125	0.000238516
515	0.7628635	0.00034279	0.000261502
520	0.7625899	0.000375	0.000285971
525	0.7661449	0.00041875	0.000320823
530	0.7699115	0.0004625	0.000356084
535	0.7697628	0.00050703	0.000390293
540	0.7710961	0.00055	0.000424103
545	0.7787934	0.00058359	0.000454496
550	0.7785589	0.000625	0.000486599
555	0.7753191	0.0007	0.000542723
560	0.7802014	0.000775	0.000604656
565	0.7793048	0.00085	0.000662409
570	0.7844828	0.000925	0.000725647
575	0.7833714	0.0014525	0.001137847
580	0.7831326	0.00198	0.001550603
585	0.7902622	0.0047175	0.003728062
590	0.7881232	0.0078	0.006147361
595	0.7867036	0.0114	0.008968421
600	0.7907276	0.015	0.011860914
605	0.7908415	0.026263	0.02076987
610	0.7918719	0.052	0.041177339
615	0.7907574	0.088388	0.069893465
620	0.798	0.175	0.13965
625	0.7934051	0.43288	0.3434492
630	0.8002646	0.6138	0.491202411
635	0.8010302	0.67756	0.542746022
640	0.7985028	0.7448	0.594724885
645	0.8004866	0.82458	0.660065241
650	0.8007203	0.8897	0.712400851
655	0.8027251	0.89654	0.719675161
660	0.8012658	0.9034	0.723863524
665	0.797546	0.91051	0.726173608
670	0.8480392	0.9172	0.777821554
675	0.8008299	0.92241	0.738693508
680	0.8007762	0.9276	0.742800003
685	0.8139811	0.93254	0.759069935
690	0.8063555	0.9379	0.756280823
695	0.8081597	0.9448	0.763549285
700	0.8100303	0.9517	0.770905837
705	0.8072626	0.9586	0.773841928
710	0.8054652	0.9655	0.777676651
715	0.8033088	0.97304	0.781651595
720	0.8105701	0.9793	0.793791299

725	0.8118406	0.9802	0.795766156
730	0.8069452	0.9828	0.793065743
735	0.8104575	0.98838	0.801039984
740	0.809377	0.9931	0.803792299
745	0.8093481	0.99719	0.807073832
750	0.8132064	1	0.8132064
755	0.8149446	1	0.8149446
760	0.8158495	1	0.8158495
765	0.818792	1	0.818792
770	0.8145474	1	0.8145474
775	0.8198198	0.99814	0.818294935
780	0.8188701	0.9966	0.816085942
785	0.8190184	0.99543	0.815275486
790	0.8205958	0.9945	0.816082523
795	0.8191057	0.9938	0.814027245
800	0.8198006	0.9931	0.814143976
805	0.8150037	0.9862	0.803756649
810	0.8251286	0.9793	0.808048438
815	0.8215384	0.97283	0.799217202
820	0.825273	0.9655	0.796801082
825	0.8211119	0.95515	0.784291813
830	0.8197116	0.9448	0.77446352
835	0.8283333	0.93402	0.773679869
840	0.8242894	0.9241	0.761725835
845	0.8218442	0.9172	0.7537955
850	0.8159624	0.9103	0.742770573
855	0.8078431	0.86334	0.697443262
860	0.7961066	0.8	0.63688528
865	0.7825619	0.72848	0.570080693
870	0.7775256	0.6552	0.509434773
875	0.7897252	0.58016	0.458166972
880	0.7945206	0.5034	0.39996167
885	0.8026845	0.42523	0.34132553
890	0.8	0.3448	0.27584
895	0.7870091	0.25704	0.202292819
900	0.7804487	0.175	0.136578523
905	0.7666667	0.11009	0.084402337
910	0.7744755	0.0621	0.048094929
915	0.7806216	0.043125	0.033664307
920	0.793169	0.0276	0.021891464
925	0.8043912	0.015525	0.012488173
930	0.8092244	0.0069	0.005583648
935	0.8173719	0	0
940	0.8190255	0	0
945	0.8215159	0	0
950	0.8139535	0	0
<b>SUM:</b>		39.46727375	
<b>T<sub>nv</sub>g(SUM/NVG):</b>		0.810440913	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - TEXSTARS

**Manufactured:** N/A

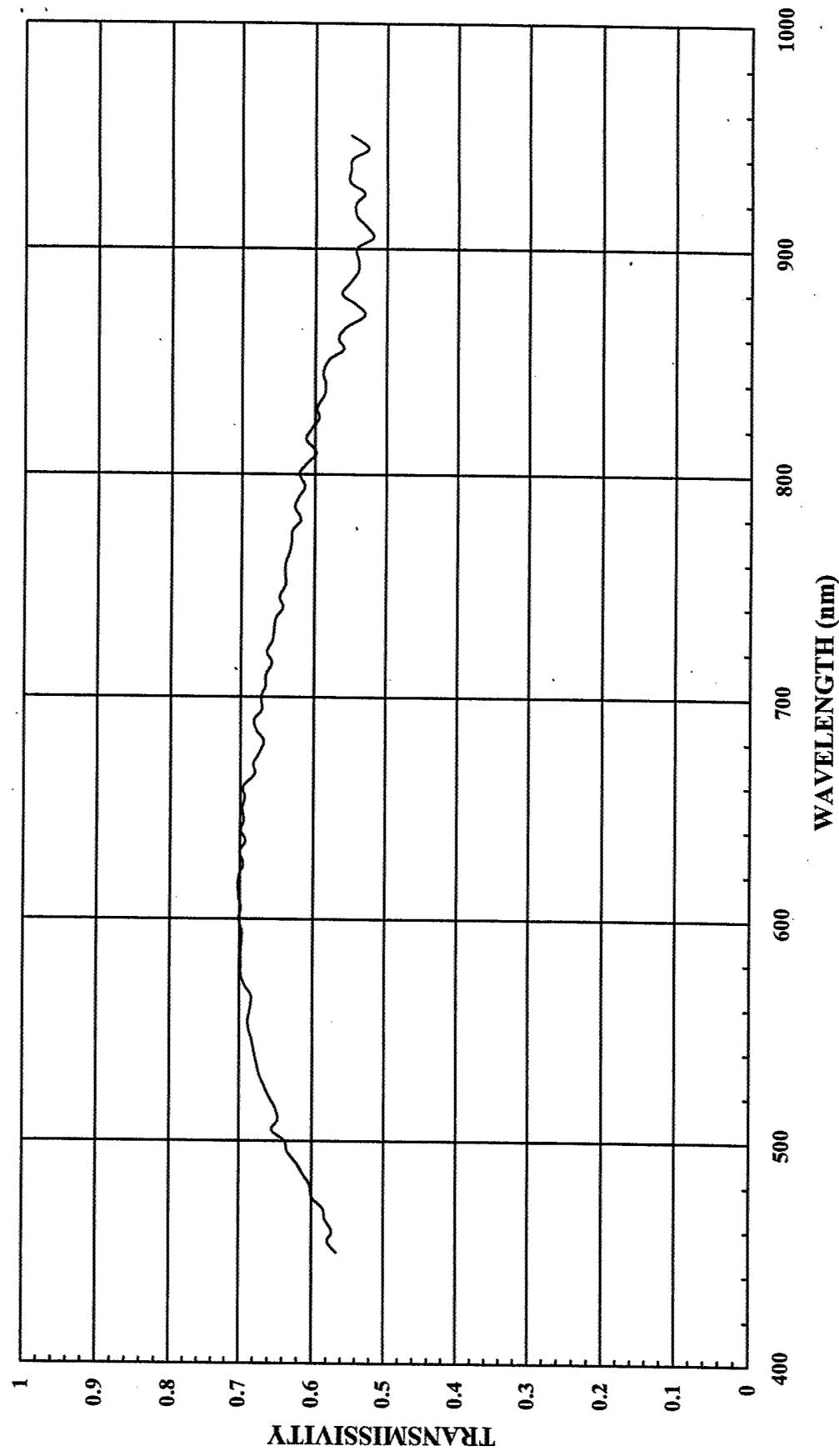
**S/N#** S-15 @ 25 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (TEXSTARS, GOLD COAT, SOLAR, S/N# S-15) @ 25 DEGREES  
 $T_{avg} = 63\%$



COUPON, TEXSTARS, GOLD COAT, SOLAR, S/N# S-15 @ 25 DEG			
	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
WAVELENGTH(nm)	READING		
450	0.5663508	0.0001	5.66351E-05
455	0.5784754	0.0001125	6.50785E-05
460	0.5726141	0.000123	7.04315E-05
465	0.5822051	0.0001375	8.00532E-05
470	0.5850468	0.00015	8.7757E-05
475	0.5996409	0.00016172	9.69739E-05
480	0.6023689	0.000175	0.000105415
485	0.6118421	0.00019375	0.000118544
490	0.6199377	0.0002125	0.000131737
495	0.6334776	0.00022266	0.00014105
500	0.6369959	0.0002375	0.000151287
505	0.6550279	0.00027656	0.000181155
510	0.6464089	0.0003125	0.000202003
515	0.6506493	0.00034279	0.000223036
520	0.6590636	0.000375	0.000247149
525	0.665529	0.00041875	0.00027869
530	0.672811	0.0004625	0.000311175
535	0.6762673	0.00050703	0.000342888
540	0.679415	0.00055	0.000373678
545	0.682824	0.00058359	0.000398489
550	0.6869301	0.000625	0.000429331
555	0.6882989	0.0007	0.000481809
560	0.6852743	0.000775	0.000531088
565	0.6839666	0.00085	0.000581372
570	0.6929982	0.000925	0.000641023
575	0.6981627	0.0014525	0.001014081
580	0.6982759	0.00198	0.001382586
585	0.6985483	0.0047175	0.003295402
590	0.6976744	0.0078	0.00544186
595	0.6970173	0.0114	0.007945997
600	0.7018951	0.015	0.010528427
605	0.6985345	0.026263	0.018345612
610	0.7020379	0.052	0.036505971
615	0.7029197	0.088388	0.062129666
620	0.7013574	0.175	0.122737545
625	0.6958175	0.43288	0.301205479
630	0.7006701	0.6138	0.430071307
635	0.6929191	0.67756	0.469494265
640	0.6993007	0.7448	0.520839161
645	0.6953552	0.82458	0.573375991
650	0.6975017	0.8897	0.620567262
655	0.6938912	0.89654	0.622101216
660	0.6963016	0.9034	0.629038865
665	0.6806597	0.91051	0.619747463
670	0.6823529	0.9172	0.62585408
675	0.6748092	0.92241	0.622450754
680	0.6680791	0.9276	0.619710173
685	0.6779221	0.93254	0.632189475
690	0.6813187	0.9379	0.639008809
695	0.6708134	0.9448	0.6337845
700	0.6716918	0.9517	0.639249086
705	0.6661515	0.9586	0.638572828
710	0.6657081	0.9655	0.642741171
715	0.6573948	0.97304	0.639671436
720	0.6646943	0.9793	0.650935128

725	0.656939	0.9802	0.643931608
730	0.6547464	0.9828	0.643484762
735	0.652459	0.98838	0.644877426
740	0.6427119	0.9931	0.638277188
745	0.6473365	0.99719	0.645517484
750	0.6390879	1	0.6390879
755	0.6397953	1	0.6397953
760	0.6391495	1	0.6391495
765	0.6335785	1	0.6335785
770	0.6311327	1	0.6311327
775	0.6300186	0.99814	0.628846765
780	0.6191083	0.9966	0.617003332
785	0.6271073	0.99543	0.62424142
790	0.6214489	0.9945	0.618030931
795	0.6138393	0.9938	0.610033496
800	0.6210938	0.9931	0.616808253
805	0.6108453	0.9862	0.602415635
810	0.5982286	0.9793	0.585845268
815	0.6120906	0.97283	0.595460098
820	0.6049489	0.9655	0.584078163
825	0.5946643	0.95515	0.567993606
830	0.5973799	0.9448	0.56440453
835	0.5870153	0.93402	0.548284031
840	0.5859155	0.9241	0.541444514
845	0.5890945	0.9172	0.540317475
850	0.5813715	0.9103	0.529222476
855	0.5612354	0.86334	0.48453697
860	0.5682327	0.8	0.45458616
865	0.5586854	0.72848	0.40699114
870	0.5314427	0.6552	0.348201257
875	0.5439277	0.58016	0.315565094
880	0.5636115	0.5034	0.283722029
885	0.5513196	0.42523	0.234437634
890	0.5412131	0.34448	0.186610277
895	0.5408497	0.25704	0.139020007
900	0.5429072	0.175	0.09500876
905	0.520073	0.11009	0.057254837
910	0.528626	0.0621	0.032827675
915	0.5434783	0.043125	0.023437502
920	0.5445135	0.0276	0.015028573
925	0.5321889	0.015525	0.008262233
930	0.5527523	0.0069	0.003813991
935	0.5512195	0	0
940	0.5491184	0	0
945	0.5263158	0	0
950	0.5511364	0	0
<b>SUM:</b>		30.90882995	
<b>Tnvg(SUM/NVG):</b>		0.63469751	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - PILKINGTON

**Manufactured:** N/A

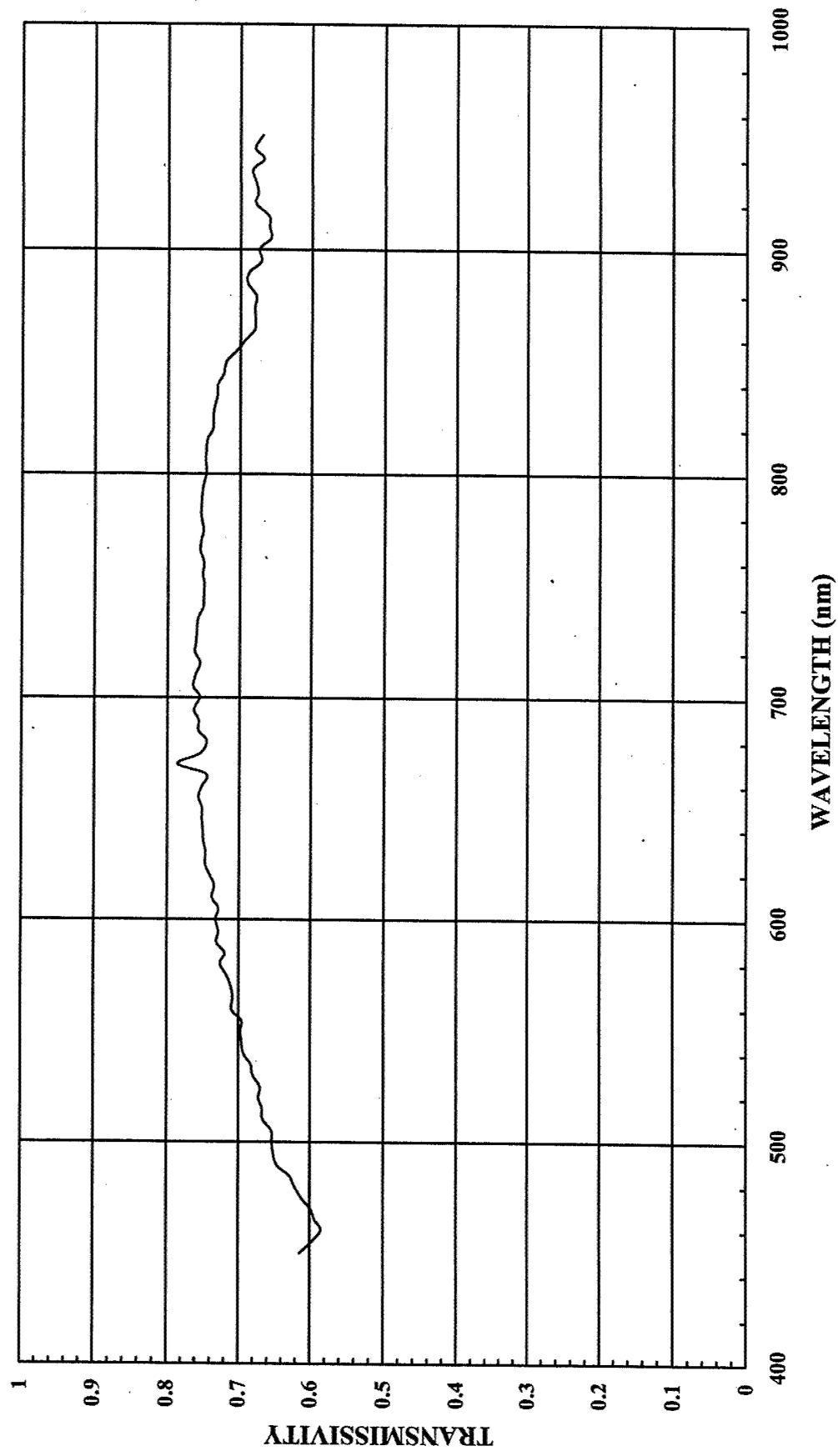
**S/N#** S-21 @ 40 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (PILKINGTON, GOLD COAT, SOLAR, S/N# S-21) @ 40 DEGREES  
 $T_{avg} = 74\%$



COUPON, PILKINGTON, GOLD COAT, SOLAR, S/N# S-21 @ 40 DEG			
	SPECTRA-RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
WAVELENGTH(nm)	READING	"NVIS A"	
450	0.614486	0.0001	6.14486E-05
455	0.5986696	0.0001125	6.73503E-05
460	0.5851703	0.000123	7.19759E-05
465	0.5935114	0.0001375	8.16078E-05
470	0.5988909	0.00015	8.98336E-05
475	0.6110124	0.00016172	9.88129E-05
480	0.6213922	0.000175	0.000108744
485	0.6288999	0.00019375	0.000121849
490	0.6464175	0.0002125	0.000137364
495	0.6517341	0.00022266	0.000145115
500	0.6532594	0.0002375	0.000155149
505	0.6537396	0.00027656	0.000180798
510	0.6666666	0.0003125	0.000208333
515	0.6675393	0.00034279	0.000228826
520	0.6727273	0.000375	0.000252273
525	0.6704676	0.00041875	0.000280758
530	0.6804597	0.0004625	0.000314713
535	0.6831797	0.00050703	0.000346393
540	0.6930917	0.00055	0.0003812
545	0.696068	0.00058359	0.000406218
550	0.6976744	0.000625	0.000436047
555	0.6962525	0.0007	0.000487377
560	0.7098646	0.000775	0.000550145
565	0.7084112	0.00085	0.00060215
570	0.7108108	0.000925	0.0006575
575	0.7162872	0.0014525	0.001040407
580	0.72577785	0.00198	0.001437041
585	0.7196904	0.0047175	0.003395139
590	0.7310925	0.0078	0.005702522
595	0.7285714	0.0114	0.008305714
600	0.7326952	0.015	0.010990428
605	0.7286821	0.026263	0.019137378
610	0.7378092	0.052	0.038366078
615	0.7347986	0.088388	0.064947379
620	0.7414708	0.175	0.12975739
625	0.7473118	0.43288	0.323496332
630	0.7469879	0.6138	0.458501173
635	0.7507062	0.67756	0.50817
640	0.7520604	0.7448	0.559125978
645	0.7520381	0.82458	0.620133965
650	0.7567204	0.8897	0.669088298
655	0.7525036	0.9034	0.678430107
660	0.7460318	0.91051	0.679811752
665	0.7857143	0.9172	0.679269414
670	0.7546875	0.92241	0.696131297
680	0.7456648	0.9276	0.691678668
685	0.7572944	0.93254	0.70620732
690	0.7566964	0.9379	0.709705554
695	0.7634408	0.9448	0.721298868
700	0.7554991	0.9517	0.719008493
705	0.7642913	0.9586	0.73264964
710	0.76187	0.9655	0.735585485
715	0.7551441	0.97304	0.734785415
720	0.7622842	0.9793	0.746504917

725	0.7608126	0.9802	0.745748511
730	0.7597103	0.9828	0.746643283
735	0.7584381	0.98838	0.749625049
740	0.7511995	0.9931	0.746016223
745	0.7503411	0.99719	0.748232642
750	0.7496689	1	0.7496689
755	0.7519431	1	0.7519431
760	0.7498421	1	0.7498421
765	0.755597	1	0.755597
770	0.7541589	1	0.7541589
775	0.7512438	0.99814	0.749846487
780	0.7540558	0.9966	0.75149201
785	0.7540761	0.99543	0.750629972
790	0.7532189	0.9945	0.749076196
795	0.751497	0.9938	0.746837719
800	0.7472528	0.9931	0.742096756
805	0.7479871	0.9862	0.737664878
810	0.7475649	0.9793	0.732090307
815	0.7457628	0.97283	0.725500425
820	0.7382378	0.9655	0.712768596
825	0.7378472	0.95515	0.704754753
830	0.7363796	0.9448	0.695731446
835	0.7319964	0.93402	0.683699278
840	0.731569	0.9241	0.676042913
845	0.7233627	0.9172	0.663468268
850	0.7191358	0.9103	0.654629319
855	0.7051282	0.86334	0.60876538
860	0.6936027	0.8	0.55488216
865	0.6803761	0.72848	0.495640381
870	0.6799502	0.6552	0.445503371
875	0.6800519	0.58016	0.39453891
880	0.678426	0.5034	0.341519648
885	0.6906158	0.42523	0.293670557
890	0.6884736	0.3448	0.237385697
895	0.6715686	0.25704	0.172619993
900	0.6736842	0.175	0.117894735
905	0.6576087	0.11009	0.072396142
910	0.6597353	0.0621	0.040969562
915	0.6607495	0.043125	0.028494822
920	0.6791667	0.0276	0.018745001
925	0.676087	0.015525	0.010496251
930	0.6788155	0.0069	0.004683827
935	0.6830467	0	0
940	0.6675127	0	0
945	0.6798941	0	0
950	0.6694678	0	0
<b>SUM:</b>	<b>36.19180276</b>		
<b>Tnvg(SUM/NVG):</b>	<b>0.743180739</b>	<b>(SPECTRAL</b>	
		<b>TRANSMISSION</b>	
		<b>COEFFICIENT)</b>	

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - SIERRACIN

**Manufactured:** N/A

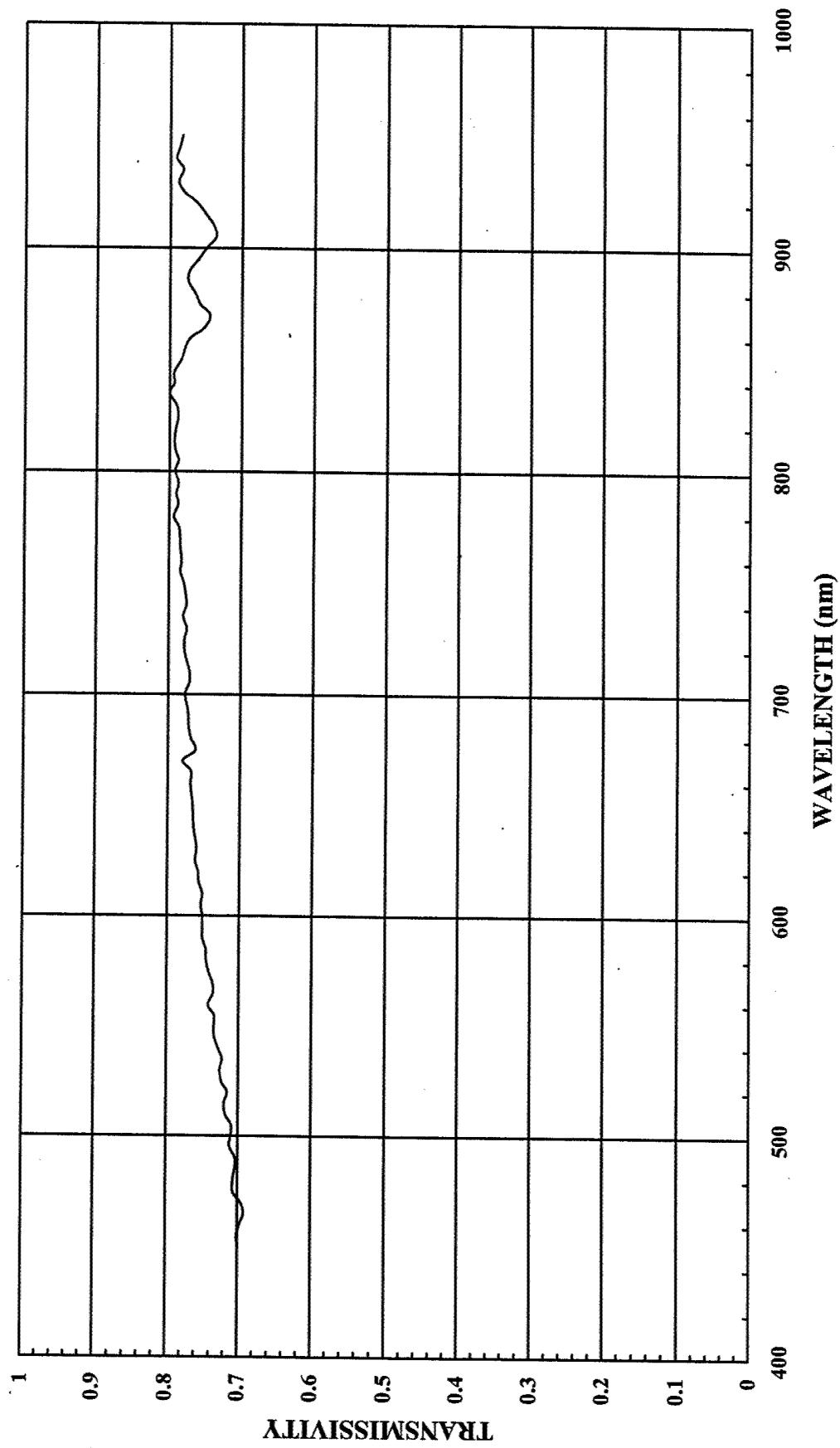
**S/N#** S-16 @ 40 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (SIERRACIN, GOLD COAT, SOLAR, S/N# S-16) @ 40 DEGREES  
T<sub>avg</sub> = 78%



COUPON, SIERRACIN, GOLD COAT, SOLAR, S/N# S-16 @ 40 DEG			
	SPECTRA-RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
WAVELENGTH(nm)	READING	"NVIS A"	
450	0.699422	0.0001	6.99422E-05
455	0.7014652	0.0001125	7.89148E-05
460	0.6977929	0.000123	8.58285E-05
465	0.6919432	0.0001375	9.51422E-05
470	0.6961241	0.00015	0.000104419
475	0.7064083	0.00016172	0.00011424
480	0.7065527	0.000175	0.000123647
485	0.7040111	0.00019375	0.000136402
490	0.703268	0.0002125	0.000149444
495	0.7114915	0.00022266	0.000158421
500	0.7099415	0.0002375	0.000168611
505	0.7090695	0.00027656	0.0001961
510	0.7173145	0.0003125	0.000224161
515	0.7192394	0.00034279	0.000246548
520	0.7153134	0.000375	0.000268243
525	0.723092	0.00041875	0.000302795
530	0.7256637	0.0004625	0.000335619
535	0.722332	0.00050703	0.000366244
540	0.728419	0.00055	0.00040063
545	0.7340037	0.00058359	0.000428357
550	0.7346221	0.000625	0.000459139
555	0.7336169	0.0007	0.000513532
560	0.7424496	0.000775	0.000575398
565	0.7356508	0.00085	0.000625303
570	0.7366771	0.000925	0.000681426
575	0.7421815	0.0014525	0.001078019
580	0.745482	0.00198	0.001476054
585	0.7460675	0.0047175	0.003519573
590	0.7507331	0.0078	0.005855718
595	0.7506925	0.0114	0.008557895
600	0.7508049	0.015	0.011262074
605	0.7530941	0.026263	0.01977851
610	0.7512315	0.052	0.039064038
615	0.7560976	0.088388	0.066829955
620	0.7573333	0.175	0.132533328
625	0.7611036	0.43288	0.329466526
630	0.7592593	0.6138	0.466033358
635	0.7617514	0.67756	0.516132279
640	0.7635683	0.7448	0.56870567
645	0.7645985	0.82458	0.630472631
650	0.7653062	0.8897	0.680892926
655	0.7671801	0.89654	0.687807647
660	0.7683545	0.9034	0.694131455
665	0.7675528	0.91051	0.6988645
670	0.7794117	0.9172	0.714876411
675	0.7621023	0.92241	0.702970783
680	0.7684346	0.9276	0.712799935
685	0.7713271	0.93254	0.719293374
690	0.7715988	0.9379	0.723682515
695	0.7734374	0.9448	0.730743656
700	0.7765958	0.9517	0.739086223
705	0.7709497	0.9586	0.739032382
710	0.7703318	0.9655	0.743755353
715	0.7745098	0.97304	0.753629016
720	0.7779098	0.9793	0.761807067

725	0.7778429	0.9802	0.762441611
730	0.7745733	0.9828	0.761250639
735	0.7795603	0.98838	0.770501809
740	0.7754473	0.9931	0.770096714
745	0.7761378	0.99719	0.773956853
750	0.779298	1	0.779298
755	0.7840046	1	0.7840046
760	0.7822121	1	0.7822121
765	0.7841164	1	0.7841164
770	0.7845641	1	0.7845641
775	0.786036	0.99814	0.784573973
780	0.7932441	0.9966	0.79054707
785	0.78773	0.99543	0.784130074
790	0.7901555	0.9945	0.785809645
795	0.7872629	0.9938	0.78238187
800	0.7920228	0.9931	0.786557843
805	0.7873271	0.9862	0.776461986
810	0.7920647	0.9793	0.775668961
815	0.7930769	0.97283	0.771529001
820	0.7909517	0.9655	0.763663866
825	0.7880221	0.95515	0.752679309
830	0.7900641	0.9448	0.746452562
835	0.8	0.93402	0.747216
840	0.7932817	0.9241	0.733071619
845	0.7940913	0.9172	0.72834054
850	0.7840375	0.9103	0.713709336
855	0.7794118	0.86334	0.672897383
860	0.772541	0.8	0.6180328
865	0.752422	0.72848	0.548124379
870	0.7446084	0.6552	0.487867424
875	0.7574672	0.58016	0.439452171
880	0.7646326	0.5034	0.384916051
885	0.7744966	0.42523	0.329339189
890	0.7728571	0.3448	0.266481128
895	0.7613293	0.25704	0.195692083
900	0.7483974	0.175	0.130969545
905	0.7366666	0.11009	0.081099626
910	0.7395105	0.0621	0.045923602
915	0.749543	0.043125	0.032324042
920	0.7628084	0.0276	0.021053512
925	0.7804391	0.015525	0.012116317
930	0.78826	0.0069	0.005438994
935	0.7817372	0	0
940	0.7911833	0	0
945	0.787286	0	0
950	0.7829458	0	0
<b>SUM:</b>		37.8580121	
<b>Tnvg(SUM/NVG):</b>		0.777395523	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - TEXSTARS

**Manufactured:** N/A

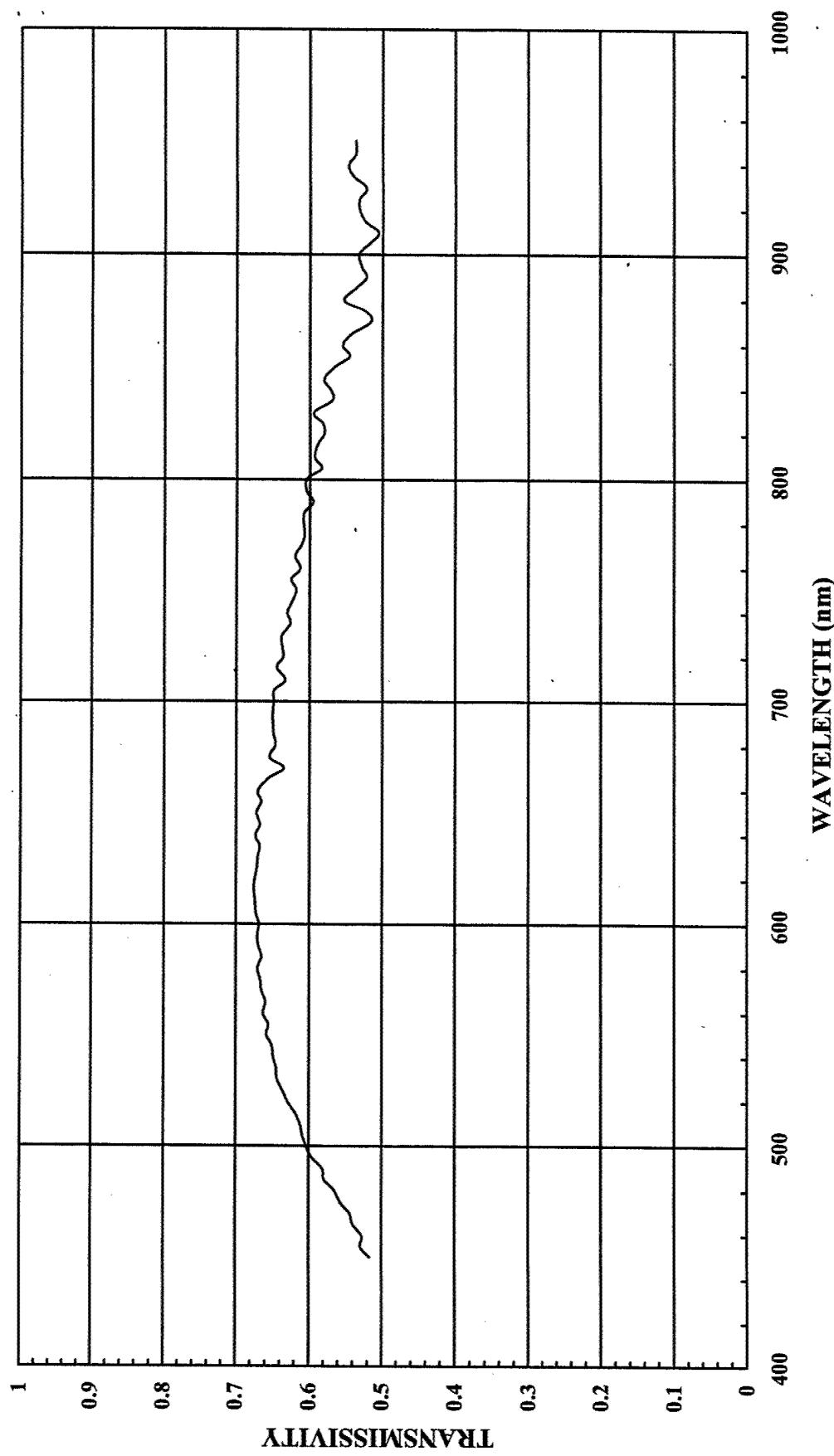
**S/N#** S-15 @ 40 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (TEXSTARS, GOLD COAT, SOLAR, S/N# S-15) @ 40 DEGREES  
 $T_{avg} = 61\%$



COUPON, TEXSTARS, GOLD COAT, SOLAR, S/N# S-15 @ 40 DEG			
WAVELENGTH(nm)	SPECTRA- RADIOMETRIC READING	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
450	0.5165877	0.0001	5.16588E-05
455	0.529148	0.0001125	5.95292E-05
460	0.526971	0.000123	6.48174E-05
465	0.5396519	0.0001375	7.42021E-05
470	0.5439253	0.00015	8.15888E-05
475	0.5565529	0.00016172	9.00057E-05
480	0.5651438	0.000175	9.89002E-05
485	0.5789474	0.00019375	0.000112171
490	0.5809969	0.0002125	0.000123462
495	0.5974026	0.00022266	0.000133018
500	0.6036162	0.0002375	0.000143359
505	0.6089386	0.00027656	0.000168408
510	0.6118784	0.0003125	0.000191212
515	0.6194805	0.00034279	0.000212352
520	0.6290516	0.000375	0.000235894
525	0.63595	0.00041875	0.000266304
530	0.6440092	0.0004625	0.000297854
535	0.6451613	0.00050703	0.000327116
540	0.6490439	0.00055	0.000356974
545	0.6512118	0.00058359	0.000380041
550	0.6585613	0.000625	0.000411601
555	0.6558505	0.0007	0.000459095
560	0.6631377	0.000775	0.000513932
565	0.6598703	0.00085	0.00056089
570	0.6651706	0.000925	0.000615283
575	0.6666667	0.0014525	0.000968333
580	0.6706896	0.00198	0.001327965
585	0.6652434	0.0047175	0.003138286
590	0.6694352	0.0078	0.005221595
595	0.6711146	0.0114	0.007650706
600	0.6690962	0.015	0.010036443
605	0.6734124	0.026263	0.01768583
610	0.6739283	0.052	0.035044272
615	0.6759124	0.088388	0.059742545
620	0.6749623	0.175	0.118118403
625	0.6722434	0.43288	0.291000723
630	0.6708861	0.6138	0.411789888
635	0.6683526	0.67756	0.452848988
640	0.6741259	0.7448	0.50208897
645	0.6680328	0.82458	0.550846486
650	0.6725186	0.8897	0.598339798
655	0.6660027	0.89654	0.597098061
660	0.670697	0.9034	0.60590767
665	0.6566717	0.91051	0.59790615
670	0.6352941	0.9172	0.582691749
675	0.6549618	0.92241	0.604143314
680	0.6468927	0.9276	0.600057669
685	0.6493506	0.93254	0.605545409
690	0.6505495	0.9379	0.610150376
695	0.6507177	0.9448	0.614798083
700	0.6490788	0.9517	0.617728294
705	0.6491499	0.9586	0.622275094
710	0.6333573	0.9655	0.611506473
715	0.6451832	0.97304	0.627789061
720	0.6364234	0.9793	0.623249436

725	0.6374838	0.9802	0.624861621
730	0.6384916	0.9828	0.627509544
735	0.6262295	0.98838	0.618952713
740	0.6305084	0.9931	0.626157892
745	0.62441	0.99719	0.622655408
750	0.618241	1	0.618241
755	0.6250799	1	0.6250799
760	0.612883	1	0.612883
765	0.6200981	1	0.6200981
770	0.6117505	1	0.6117505
775	0.6071649	0.99814	0.606035573
780	0.6082803	0.9966	0.606212147
785	0.6075523	0.99543	0.604775786
790	0.5951704	0.9945	0.591896963
795	0.6041667	0.9938	0.600420866
800	0.6039063	0.9931	0.599739347
805	0.583732	0.9862	0.575676498
810	0.5933977	0.9793	0.581114368
815	0.5894206	0.97283	0.573406042
820	0.5802048	0.9655	0.560187734
825	0.5817556	0.95515	0.555663861
830	0.5947598	0.9448	0.561929059
835	0.5689811	0.93402	0.531439727
840	0.570892	0.9241	0.527561297
845	0.5803311	0.9172	0.532279685
850	0.5649949	0.9103	0.514314857
855	0.5452609	0.86334	0.470745545
860	0.5548098	0.8	0.44384784
865	0.5446009	0.72848	0.396730864
870	0.5166461	0.6552	0.338506525
875	0.5232558	0.58016	0.303572085
880	0.5526676	0.5034	0.27821287
885	0.5366569	0.42523	0.228202614
890	0.5225506	0.3448	0.180175447
895	0.5294117	0.25704	0.136079983
900	0.5323993	0.175	0.093169878
905	0.5182481	0.11009	0.057053933
910	0.5057252	0.0621	0.031405535
915	0.5237154	0.043125	0.022585227
920	0.5320911	0.0276	0.014685714
925	0.5321889	0.015525	0.008262233
930	0.5229358	0.0069	0.003608257
935	0.5414634	0	0
940	0.5465995	0	0
945	0.5368421	0	0
950	0.5369318	0	0
<b>SUM:</b>		29.93041377	
<b>T<sub>Nvg</sub>(SUM/NVG):</b>		0.614606218	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - PILKINGTON

**Manufactured:** N/A

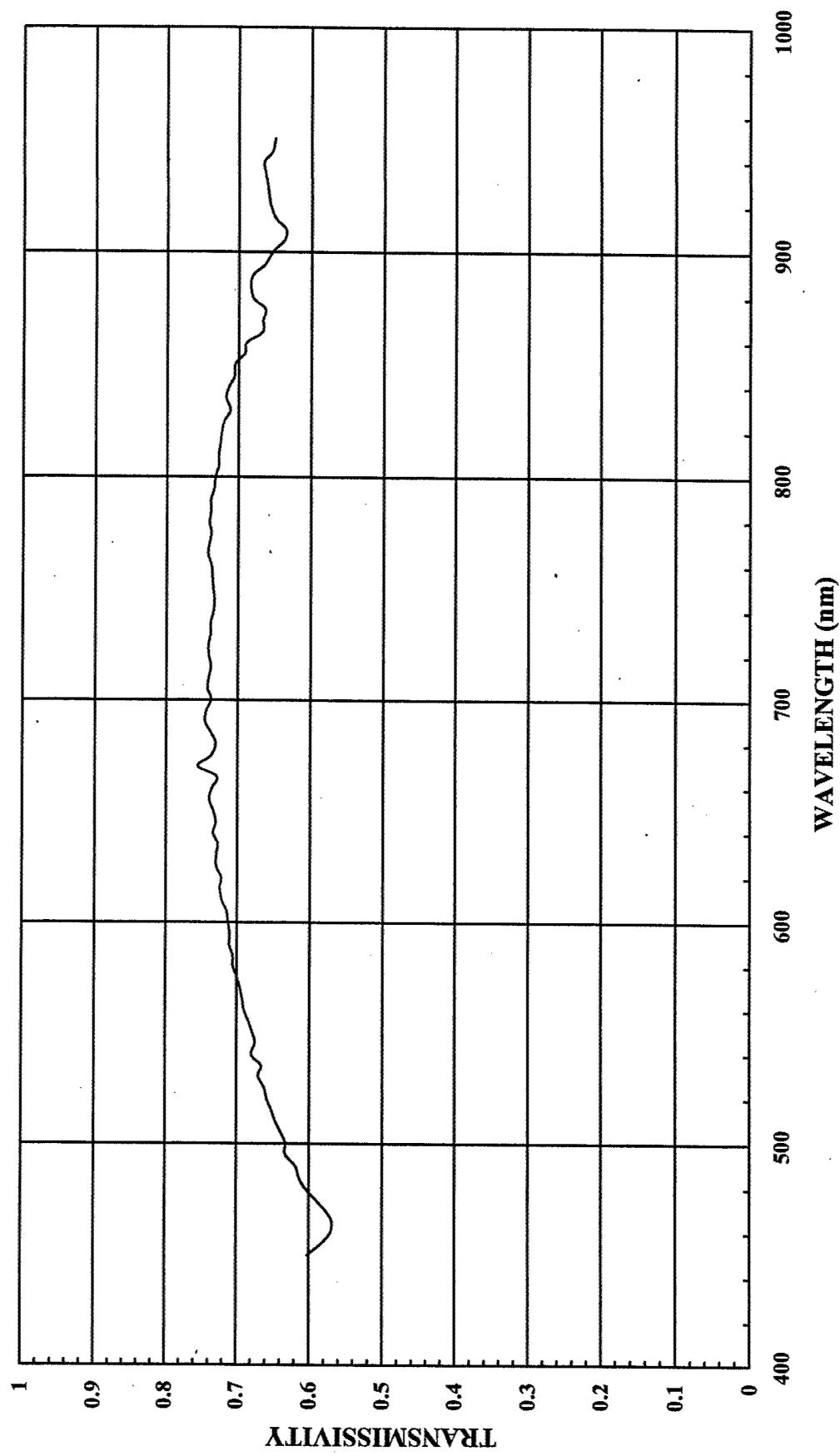
**S/N#** S-21 @ 45 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (PILKINGTON, GOLD COAT, SOLAR, S/N# S-21) @ 45 DEGREES  
 $T_{avg} = 73\%$



**COUPON, PILKINGTON, GOLD COAT, SOLAR, S/N# S-21 @ 45 DEG**

WAVELENGTH(nm)	READING	SPECTRA-	RELATIVE	NVG SPECTRAL RESPONSE
		RADIOMETRIC	SPECTRAL SENSITIVITY "NVIS A"	
450	0.6028038		0.0001	6.02804E-05
455	0.5853658		0.0001125	6.58537E-05
460	0.5720081		0.000123	7.0357E-05
465	0.5687023		0.0001375	7.81966E-05
470	0.5767097		0.00015	8.65065E-05
475	0.5896981		0.00016172	9.5366E-05
480	0.6061121		0.000175	0.00010607
485	0.6141215		0.00019375	0.000118986
490	0.6183801		0.0002125	0.000131406
495	0.6329479		0.00022266	0.000140932
500	0.6324549		0.0002375	0.000150208
505	0.6385041		0.00027656	0.000176585
510	0.6458333		0.0003125	0.000201823
515	0.6518325		0.00034279	0.000223442
520	0.6581818		0.000375	0.000246818
525	0.6613455		0.00041875	0.000276938
530	0.6701149		0.0004625	0.000309928
535	0.6658986		0.00050703	0.000337631
540	0.6795017		0.00055	0.000373726
545	0.674814		0.00058359	0.000393815
550	0.678463		0.000625	0.000424039
555	0.683432		0.0007	0.000478402
560	0.6895551		0.000775	0.000534405
565	0.6925234		0.00085	0.000588645
570	0.6954954		0.000925	0.000643333
575	0.6996498		0.0014525	0.001016241
580	0.7058823		0.00198	0.001397647
585	0.7059329		0.0047175	0.003330238
590	0.7109243		0.0078	0.00554521
595	0.71103175		0.0114	0.00809762
600	0.7128129		0.015	0.010692194
605	0.7145877		0.026263	0.018767217
610	0.7215547		0.052	0.037520844
615	0.7245421		0.088388	0.064040827
620	0.722517		0.175	0.126440475
625	0.7296466		0.43288	0.31584942
630	0.7296687		0.6138	0.447870648
635	0.7280701		0.67756	0.493311177
640	0.7344633		0.7448	0.547028266
645	0.7307692		0.82458	0.602577667
650	0.734375		0.8897	0.653373438
655	0.7399194		0.89654	0.663367339
660	0.7367668		0.9034	0.665595127
665	0.7294029		0.91051	0.664128634
670	0.7559524		0.9172	0.693359541
675	0.7375		0.92241	0.680277375
680	0.7312139		0.9276	0.678274014
685	0.7374005		0.93254	0.687655462
690	0.7455357		0.9379	0.699237933
695	0.744868		0.9448	0.703751286
700	0.7377326		0.9517	0.702100115
705	0.7423649		0.9586	0.711630993
710	0.7414171		0.9655	0.71583821
715	0.7379972		0.97304	0.718100795
720	0.7410358		0.9793	0.725696359

725	0.7418087	0.9802	0.727120888
730	0.7386439	0.9828	0.725939225
735	0.7385837	0.98838	0.730001357
740	0.7347499	0.9931	0.729680126
745	0.7332879	0.99719	0.731227361
750	0.7350994	1	0.7350994
755	0.736399	1	0.736399
760	0.7372078	1	0.7372078
765	0.7425373	1	0.7425373
770	0.7406038	1	0.7406038
775	0.7381841	0.99814	0.736811078
780	0.7406693	0.9966	0.738151024
785	0.7384511	0.99543	0.735076378
790	0.7389127	0.9945	0.73484868
795	0.7342815	0.9938	0.729728955
800	0.7323391	0.9931	0.72728596
805	0.7278582	0.9862	0.717813757
810	0.7280844	0.9793	0.713013053
815	0.7254238	0.97283	0.705714035
820	0.7236955	0.9655	0.698728005
825	0.719618	0.95515	0.687343133
830	0.711775	0.9448	0.67248502
835	0.7174111	0.93402	0.670076316
840	0.7136106	0.9241	0.659447555
845	0.7057674	0.9172	0.647329859
850	0.7047325	0.9103	0.641517995
855	0.6912393	0.86334	0.596774537
860	0.6891133	0.8	0.55129064
865	0.6674501	0.72848	0.486224049
870	0.6662516	0.6552	0.436528048
875	0.6632124	0.58016	0.384769306
880	0.6797829	0.5034	0.342202712
885	0.6832844	0.42523	0.290553025
890	0.6806854	0.3448	0.234700326
895	0.6633986	0.25704	0.170519976
900	0.6526316	0.175	0.11421053
905	0.6376812	0.11009	0.070202323
910	0.6351607	0.0621	0.039443479
915	0.6489152	0.043125	0.027984468
920	0.65625	0.0276	0.0181125
925	0.6586957	0.015525	0.010226251
930	0.6605923	0.0069	0.004558087
935	0.6633906	0	0
940	0.6649746	0	0
945	0.6534391	0	0
950	0.64986	0	0
<b>SUM:</b>		35.38167332	
<b>Tnvg(SUM/NVG):</b>		0.726545133	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - SIERRACIN

**Manufactured:** N/A

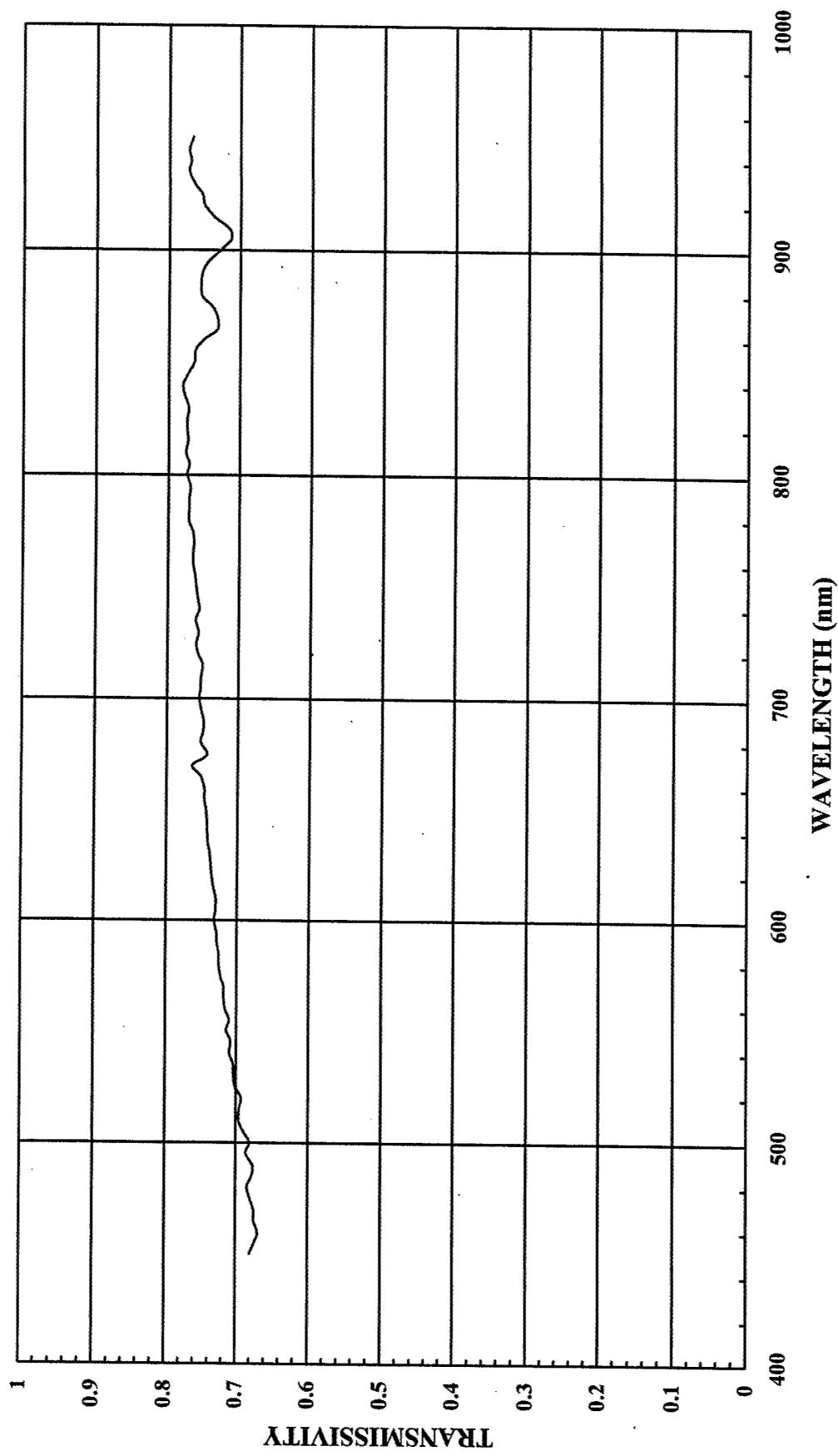
**S/N#** S-16 @ 45 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (SIERRACIN, GOLD COAT, SOLAR, S/N# S-16) @ 45 DEGREES  
 $T_{avg} = 76\%$



**COUPON, SIERRACIN, GOLD COAT, SOLAR, S/N# S-16 @ 45 DEG**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	SPECTRAL
READING	"NVIS A"	RESPONSE	
450	0.6801541	0.0001	6.80154E-05
455	0.6739926	0.0001125	7.58242E-05
460	0.6689304	0.000123	8.22784E-05
465	0.6745656	0.0001375	9.27528E-05
470	0.6744186	0.00015	0.000101163
475	0.6795827	0.00016172	0.000109902
480	0.6837608	0.000175	0.000119658
485	0.6777317	0.00019375	0.000131311
490	0.675817	0.0002125	0.000143611
495	0.6858191	0.00022266	0.000152704
500	0.6807017	0.0002375	0.000161667
505	0.689046	0.00027656	0.000190563
510	0.696113	0.0003125	0.000217535
515	0.6957494	0.00034279	0.000238496
520	0.6927029	0.000375	0.000259764
525	0.7015656	0.00041875	0.000293781
530	0.7040315	0.0004625	0.000325615
535	0.7045454	0.00050703	0.000357226
540	0.7099903	0.00055	0.000390495
545	0.7084095	0.00058359	0.000413421
550	0.7144112	0.000625	0.000446507
555	0.7106383	0.0007	0.000497447
560	0.7164429	0.000775	0.000555243
565	0.7186742	0.00085	0.000610873
570	0.7186521	0.000925	0.000664753
575	0.7231122	0.0014525	0.00105032
580	0.7259036	0.00198	0.001437289
585	0.7258427	0.0047175	0.003424163
590	0.728739	0.0078	0.005684164
595	0.7292244	0.0114	0.008313158
600	0.7327753	0.015	0.01099163
605	0.7308168	0.026263	0.019193442
610	0.7302956	0.052	0.037975371
615	0.7342747	0.088388	0.064901072
620	0.7366666	0.175	0.128916655
625	0.7382234	0.43288	0.319562145
630	0.739418	0.6138	0.453854768
635	0.742434	0.67756	0.503043581
640	0.7429819	0.7448	0.553372919
645	0.743309	0.82458	0.612917735
650	0.744898	0.8897	0.662735751
655	0.7476304	0.89654	0.670280559
660	0.7474684	0.9034	0.675262953
665	0.7525562	0.91051	0.685209946
670	0.7647058	0.9172	0.70138816
675	0.7441217	0.92241	0.686385297
680	0.7529108	0.9276	0.698400058
685	0.75	0.93254	0.699405
690	0.7487587	0.9379	0.702260785
695	0.7526041	0.9448	0.711060354
700	0.7553191	0.9517	0.718837187
705	0.7534916	0.9586	0.722297048
710	0.7534157	0.9655	0.727422858
715	0.7512255	0.97304	0.730972461
720	0.7577197	0.9793	0.742034902

725	0.760258	0.9802	0.745204892
730	0.7569158	0.9828	0.743896848
735	0.7611408	0.98838	0.752296344
740	0.7563233	0.9931	0.751104669
745	0.7583026	0.99719	0.75617177
750	0.7608566	1	0.7608566
755	0.7624052	1	0.7624052
760	0.7651083	1	0.7651083
765	0.7656599	1	0.7656599
770	0.7645752	1	0.7645752
775	0.7657658	0.99814	0.764341476
780	0.7716948	0.9966	0.769071038
785	0.7711656	0.99543	0.767641373
790	0.7711373	0.9945	0.767130449
795	0.7696477	0.9938	0.764875884
800	0.7742165	0.9931	0.768874406
805	0.7713038	0.9862	0.760659808
810	0.7759001	0.9793	0.759838968
815	0.7730769	0.97283	0.752072401
820	0.774571	0.9655	0.747848301
825	0.7746257	0.95515	0.739883737
830	0.7724359	0.9448	0.729797438
835	0.7783333	0.93402	0.726978869
840	0.7803618	0.9241	0.721132339
845	0.7735004	0.9172	0.709454567
850	0.7643192	0.9103	0.695759768
855	0.7637255	0.86334	0.659354773
860	0.7520493	0.8	0.60163944
865	0.7330463	0.72848	0.534009569
870	0.7332577	0.6552	0.480430445
875	0.7407408	0.58016	0.429748183
880	0.75467	0.5034	0.379900878
885	0.7557047	0.42523	0.32134831
890	0.7542858	0.3448	0.260077744
895	0.7462235	0.25704	0.191809288
900	0.7275641	0.175	0.127323718
905	0.7133333	0.11009	0.078530863
910	0.7167832	0.0621	0.044512237
915	0.736746	0.043125	0.031772171
920	0.7514232	0.0276	0.02073928
925	0.754491	0.015525	0.011713473
930	0.7651992	0.0069	0.005279874
935	0.7728285	0	0
940	0.7703016	0	0
945	0.7726161	0	0
950	0.7674419	0	0
<b>SUM:</b>		36.95612312	
<b>T<sub>NVG</sub>(SUM/NVG):</b>		0.758875679	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - TEXSTARS

**Manufactured:** N/A

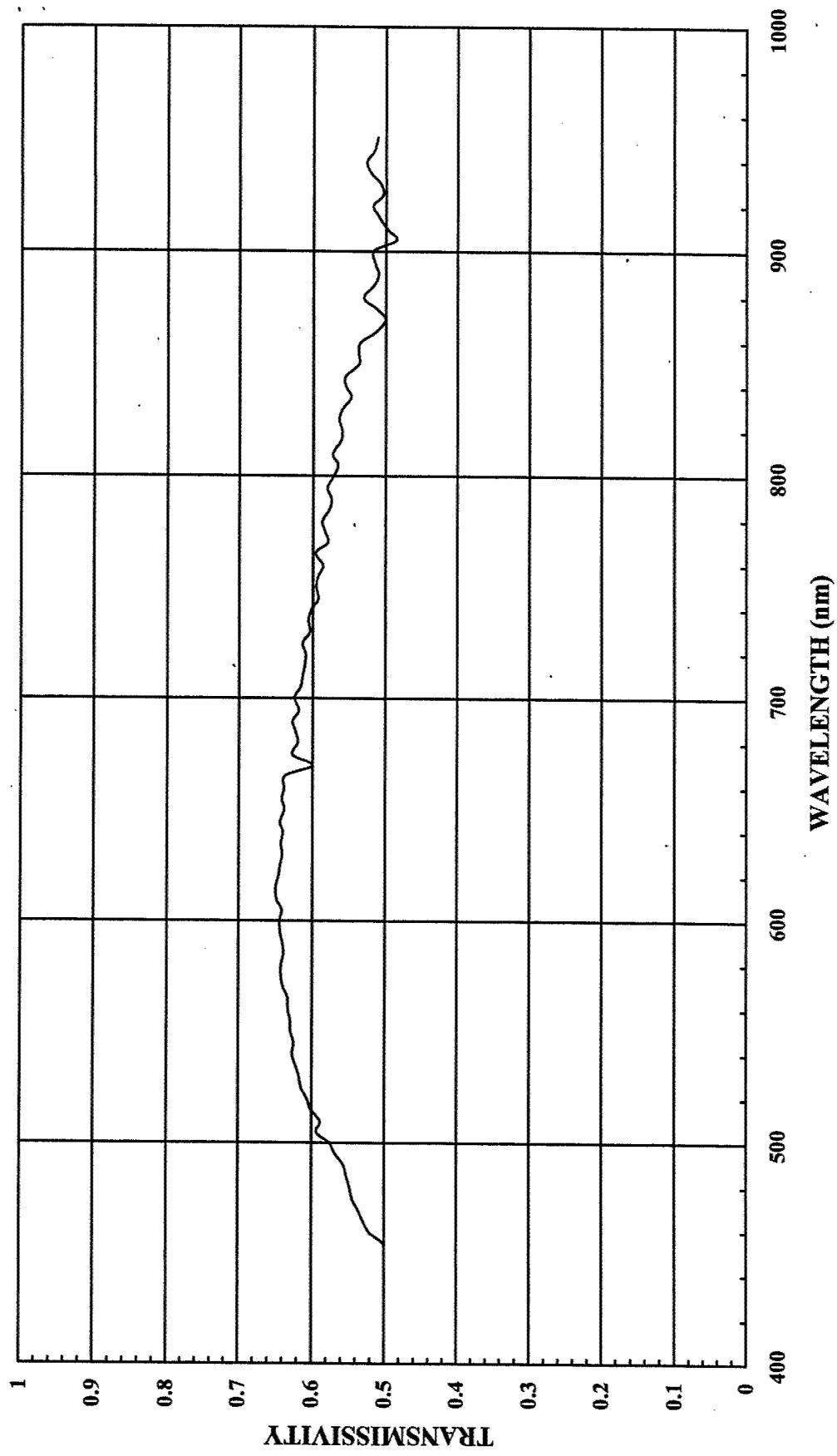
**S/N#** S-15 @ 45 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (TEXSTARS, GOLD COAT, SOLAR, S/N# S-15) @ 45 DEGREES  
 $T_{avg} = 59\%$



COUPON, TEXSTARS, GOLD COAT, SOLAR, S/N# S-15 @ 45 DEG			
	SPECTRA-RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL
WAVELENGTH(nm)	READING	"NVIS A"	RESPONSE
450	0.5	0.0001	0.00005
455	0.5022421	0.0001125	5.65022E-05
460	0.5207469	0.000123	6.40519E-05
465	0.5299807	0.0001375	7.28723E-05
470	0.5364486	0.00015	8.04673E-05
475	0.5439856	0.00016172	8.79734E-05
480	0.5482233	0.000175	9.59391E-05
485	0.5526316	0.00019375	0.000107072
490	0.5560748	0.0002125	0.000118166
495	0.5685426	0.00022266	0.000126592
500	0.5757997	0.0002375	0.000136752
505	0.5935755	0.00027656	0.000164159
510	0.5883977	0.0003125	0.000183874
515	0.6012987	0.00034279	0.000206119
520	0.6062425	0.000375	0.000227341
525	0.6143345	0.00041875	0.000257253
530	0.6175115	0.0004625	0.000285599
535	0.6221198	0.00050703	0.000315433
540	0.6265467	0.00055	0.000344601
545	0.6248683	0.00058359	0.000364667
550	0.6291793	0.000625	0.000393237
555	0.6293018	0.0007	0.000440511
560	0.6323388	0.000775	0.000490063
565	0.6329935	0.00085	0.000538044
570	0.6391382	0.000925	0.000591203
575	0.6421697	0.0014525	0.000932751
580	0.6422414	0.00198	0.001271638
585	0.6387703	0.0047175	0.003013399
590	0.6403655	0.0078	0.004994851
595	0.6436421	0.0114	0.00733752
600	0.6443148	0.015	0.009664722
605	0.6413119	0.026263	0.016842774
610	0.6486297	0.052	0.033728744
615	0.6496351	0.088388	0.057419947
620	0.6463047	0.175	0.113103323
625	0.6441064	0.43288	0.278820778
630	0.641102	0.6138	0.393508408
635	0.6430636	0.67756	0.435714173
640	0.6398602	0.7448	0.476567877
645	0.6441257	0.82458	0.53113317
650	0.6380824	0.8897	0.567701911
655	0.6414343	0.89654	0.575071507
660	0.6386913	0.9034	0.57699372
665	0.6371814	0.91051	0.580160037
670	0.6	0.9172	0.55032
675	0.6274809	0.92241	0.578794657
680	0.6200565	0.9276	0.575164409
685	0.6233767	0.93254	0.581323708
690	0.6274725	0.9379	0.588506458
695	0.6191387	0.9448	0.584962244
700	0.6247906	0.9517	0.594613214
705	0.6166924	0.9586	0.591161335
710	0.6139468	0.9655	0.592765635
715	0.6105834	0.97304	0.594122072
720	0.6101249	0.9793	0.597495315

725	0.6141375	0.9802	0.601977578
730	0.6040312	0.9828	0.593641863
735	0.6059017	0.98838	0.598861122
740	0.6020339	0.9931	0.597879866
745	0.5927175	0.99719	0.591051964
750	0.5954397	1	0.5954397
755	0.5924504	1	0.5924504
760	0.5859913	1	0.5859913
765	0.596201	1	0.596201
770	0.5796487	1	0.5796487
775	0.5836936	0.99814	0.58260793
780	0.5872611	0.9966	0.585264412
785	0.5772083	0.99543	0.574570458
790	0.5752841	0.9945	0.572120037
795	0.5803571	0.9938	0.576758886
800	0.5710937	0.9931	0.567153153
805	0.5661882	0.9862	0.558374803
810	0.5732689	0.9793	0.561402234
815	0.5625525	0.97283	0.547267949
820	0.5605803	0.9655	0.54124028
825	0.5645438	0.95515	0.539224011
830	0.5606987	0.9448	0.529748132
835	0.5482417	0.93402	0.512068713
840	0.5549296	0.9241	0.512810443
845	0.5559883	0.9172	0.509952469
850	0.5373592	0.9103	0.48915808
855	0.5378062	0.86334	0.464309605
860	0.5357942	0.8	0.42863536
865	0.5140845	0.72848	0.374500277
870	0.5006166	0.6552	0.328003996
875	0.5129199	0.58016	0.297575609
880	0.5307798	0.5034	0.267194551
885	0.516129	0.42523	0.219473535
890	0.5101088	0.3448	0.175885514
895	0.5147059	0.25704	0.132300005
900	0.5166375	0.175	0.090411563
905	0.4854015	0.11009	0.053437851
910	0.4980916	0.0621	0.030931488
915	0.5099602	0.043125	0.021992034
920	0.5175983	0.0276	0.014285713
925	0.5042918	0.015525	0.00782913
930	0.5068807	0.0069	0.003497477
935	0.5219512	0	0
940	0.5264484	0	0
945	0.5157894	0	0
950	0.5113636	0	0
<b>SUM:</b>		28.70213798	
<b>T<sub>nv</sub>g(SUM/NVG):</b>		0.589384184	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - PILKINGTON

**Manufactured:** N/A

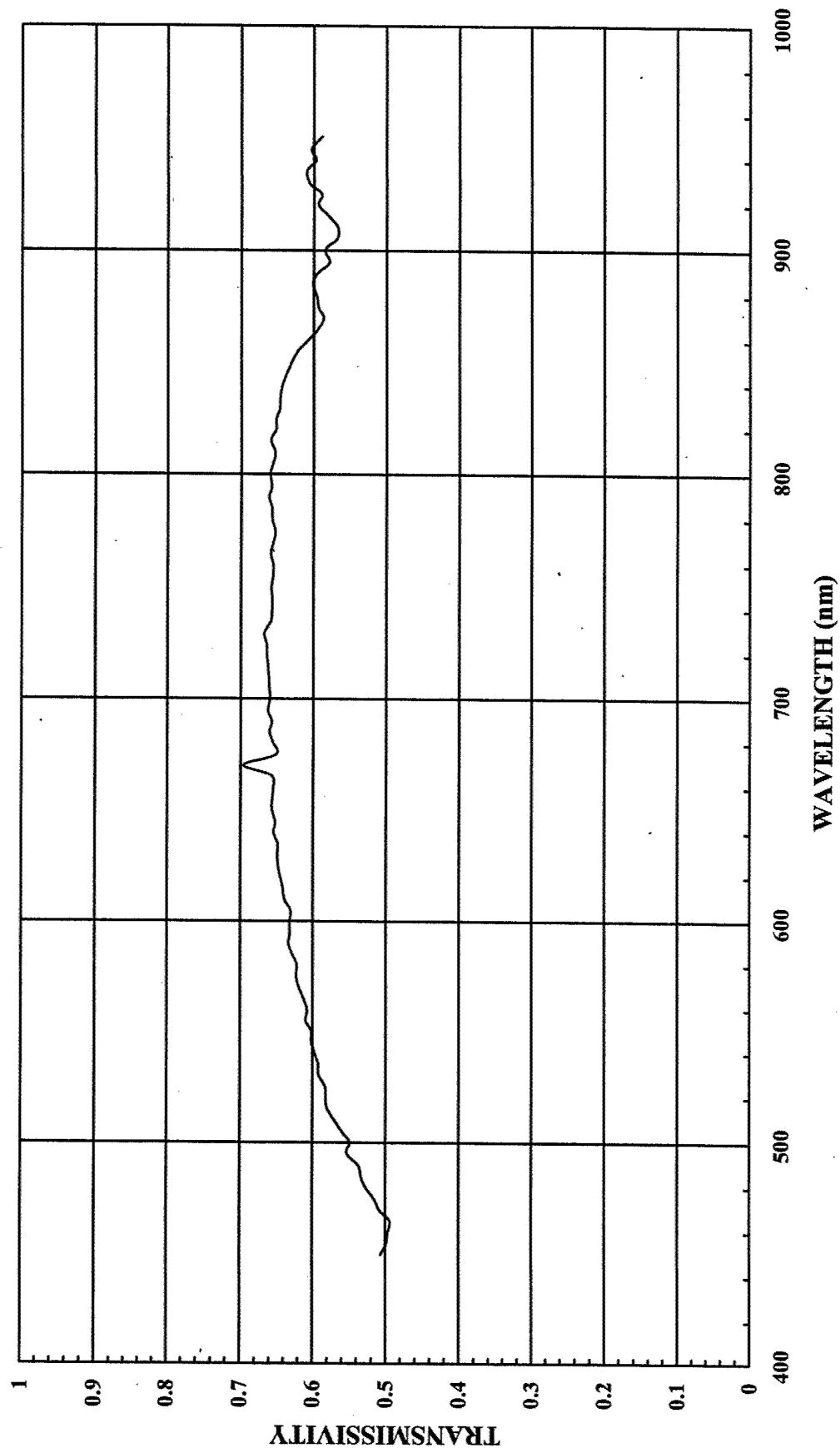
**S/N#** S-21 @ 60 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (PILKINGTON, GOLD COAT, SOLAR, S/N# S- 21) @ 60 DEGREES  
 $T_{avg} = 65\%$



COUPON, PILKINGTON, GOLD COAT, SOLAR, S/N# S-21 @ 60 DEG			
	SPECTRA-RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
WAVELENGTH(nm)	READING	"NVIS A"	
450	0.5070093	0.0001	5.07009E-05
455	0.4988914	0.0001125	5.61253E-05
460	0.4969574	0.000123	6.11258E-05
465	0.4942748	0.0001375	6.79628E-05
470	0.5083179	0.00015	7.62477E-05
475	0.5150977	0.00016172	8.33016E-05
480	0.5280136	0.000175	9.24024E-05
485	0.5336617	0.00019375	0.000103397
490	0.5373832	0.0002125	0.000114194
495	0.5534682	0.00022266	0.000123235
500	0.5492371	0.0002375	0.000130444
505	0.5595568	0.00027656	0.000154751
510	0.5694444	0.0003125	0.000177951
515	0.579843	0.00034279	0.000198764
520	0.5818182	0.000375	0.000218182
525	0.5826682	0.00041875	0.000243992
530	0.591954	0.0004625	0.000273779
535	0.5921659	0.00050703	0.000300246
540	0.5968289	0.00055	0.000328256
545	0.6014878	0.00058359	0.000351022
550	0.6016178	0.000625	0.000376011
555	0.6094675	0.0007	0.000426627
560	0.6073501	0.000775	0.000470696
565	0.6130841	0.00085	0.000521121
570	0.6189189	0.000925	0.0005725
575	0.6225919	0.0014525	0.000904315
580	0.6219723	0.00198	0.001231505
585	0.6285469	0.0047175	0.00296517
590	0.6336134	0.0078	0.004942185
595	0.6317461	0.0114	0.007201906
600	0.6318114	0.015	0.009477171
605	0.6307259	0.026263	0.016564754
610	0.6388692	0.052	0.033221198
615	0.6417583	0.088388	0.056723733
620	0.6451858	0.175	0.112907515
625	0.6482334	0.43288	0.280607274
630	0.6490964	0.6138	0.39841537
635	0.6491228	0.67756	0.439819644
640	0.654661	0.7448	0.487591513
645	0.6524726	0.82458	0.538015857
650	0.6569294	0.8897	0.584470087
655	0.656586	0.89654	0.588655612
660	0.6552218	0.9034	0.591927374
665	0.6575964	0.91051	0.598748098
670	0.6964286	0.9172	0.638764312
675	0.6515625	0.92241	0.601007766
680	0.6560694	0.9276	0.608569975
685	0.6604774	0.93254	0.615921595
690	0.6573661	0.9379	0.616543665
695	0.6627566	0.9448	0.626172436
700	0.6598985	0.9517	0.628025402
705	0.6609241	0.9586	0.633561842
710	0.6617969	0.9655	0.638964907
715	0.6632373	0.97304	0.645356422
720	0.6646746	0.9793	0.650915836

725	0.6651376	0.9802	0.651967876
730	0.6682028	0.9828	0.656709712
735	0.6585043	0.98838	0.65085248
740	0.6572996	0.9931	0.652764233
745	0.6568895	0.99719	0.655043641
750	0.6582782	1	0.6582782
755	0.6560881	1	0.6560881
760	0.655717	1	0.655717
765	0.659204	1	0.659204
770	0.6555761	1	0.6555761
775	0.652985	0.99814	0.651770448
780	0.6570142	0.9966	0.654780352
785	0.6576087	0.99543	0.654603428
790	0.6616595	0.9945	0.658020373
795	0.6579342	0.9938	0.653855008
800	0.6601256	0.9931	0.655570733
805	0.6561997	0.9862	0.647144144
810	0.6534091	0.9793	0.639883532
815	0.6593221	0.97283	0.641408319
820	0.6518392	0.9655	0.629350748
825	0.6519097	0.95515	0.62267155
830	0.6467487	0.9448	0.611048172
835	0.6463081	0.93402	0.603664692
840	0.6436673	0.9241	0.594812952
845	0.6383187	0.9172	0.585465912
850	0.6306584	0.9103	0.574088342
855	0.6228632	0.86334	0.537742715
860	0.6094276	0.8	0.48754208
865	0.5957697	0.72848	0.434006311
870	0.5865505	0.6552	0.384307888
875	0.5932643	0.58016	0.344188216
880	0.5956581	0.5034	0.299854288
885	0.601173	0.42523	0.255636795
890	0.5950156	0.3448	0.205161379
895	0.5784314	0.25704	0.148680007
900	0.5842105	0.175	0.102236838
905	0.5688406	0.11009	0.062623662
910	0.5671077	0.0621	0.035217388
915	0.5779092	0.043125	0.024922334
920	0.5937499	0.0276	0.016387497
925	0.5891305	0.015525	0.009146251
930	0.6059226	0.0069	0.004180866
935	0.6093366	0	0
940	0.5964467	0	0
945	0.6031746	0	0
950	0.5882353	0	0
<b>SUM:</b>		31.64594203	
<b>Tnvg(SUM/NVG):</b>		0.649833741	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - SIERRACIN

**Manufactured:** N/A

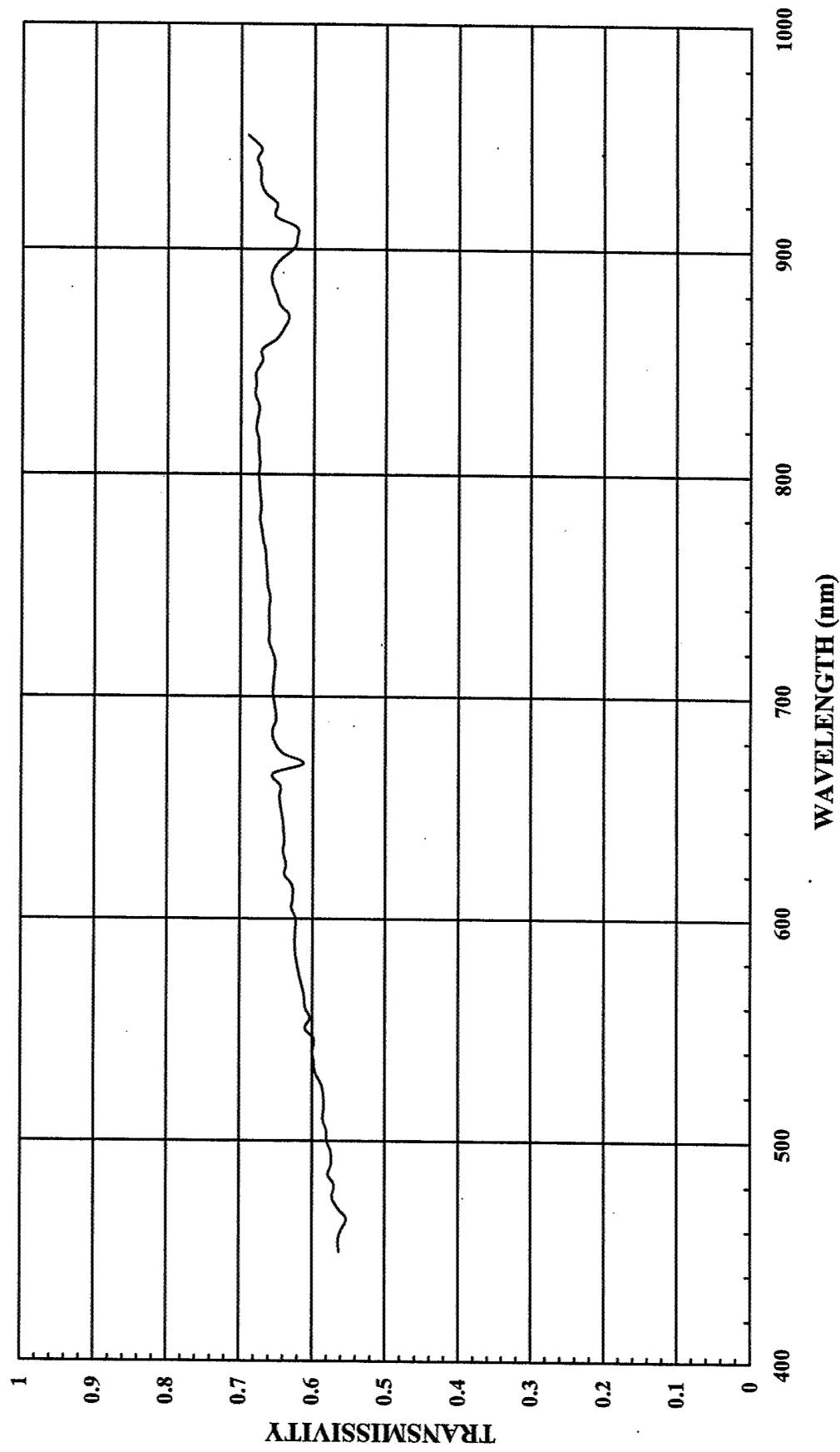
**S/N#** S-16 @ 60 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (SIERRACIN, GOLD COAT, SOLAR, S/N# S-16) @ 60 DEGREES  
 $T_{avg} = 66\%$



**COUPON, SIERRACIN, GOLD COAT, SOLAR, S/N# S-16 @ 60 DEG**

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
	READING	"NVIS A"	
450	0.5626204	0.0001	5.6262E-05
455	0.5641025	0.0001125	6.34615E-05
460	0.5602717	0.000123	6.89134E-05
465	0.5529226	0.0001375	7.60269E-05
470	0.5643411	0.00015	8.46512E-05
475	0.5722802	0.00016172	9.25492E-05
480	0.5698006	0.000175	9.97151E-05
485	0.5781466	0.00019375	0.000112016
490	0.5738562	0.0002125	0.000121944
495	0.5745721	0.0002266	0.000127934
500	0.5801169	0.0002375	0.000137778
505	0.5806832	0.00027656	0.000160594
510	0.5853946	0.0003125	0.000182936
515	0.5838926	0.00034279	0.000200153
520	0.5847893	0.000375	0.000219296
525	0.5870842	0.00041875	0.000245842
530	0.5958702	0.0004625	0.00027559
535	0.5978261	0.00050703	0.000303116
540	0.600388	0.00055	0.000330213
545	0.5978062	0.00058359	0.000348874
550	0.6098418	0.000625	0.000381151
555	0.6034042	0.0007	0.000422383
560	0.6098993	0.000775	0.000472672
565	0.6119644	0.00085	0.00052017
570	0.6152038	0.000925	0.000569064
575	0.6186118	0.0014525	0.000898534
580	0.6219879	0.00198	0.001231536
585	0.62397	0.0047175	0.002943578
590	0.6246334	0.0078	0.004872141
595	0.6236339	0.0114	0.007109426
600	0.6233097	0.015	0.009349646
605	0.6293316	0.026263	0.016528136
610	0.627463	0.052	0.032628076
615	0.6283697	0.088388	0.055540341
620	0.6386667	0.175	0.111766673
625	0.6366084	0.43288	0.275575044
630	0.640873	0.6138	0.393367847
635	0.6387637	0.67756	0.432800733
640	0.6400499	0.7448	0.476709166
645	0.6411192	0.82458	0.52865407
650	0.6440576	0.8897	0.573018047
655	0.6457346	0.89654	0.578926898
660	0.6443039	0.9034	0.582064143
665	0.6543967	0.91051	0.595834739
670	0.6127451	0.9172	0.562009806
675	0.6417704	0.92241	0.591975435
680	0.6532989	0.9276	0.60600006
685	0.6552133	0.93254	0.611012611
690	0.6504469	0.9379	0.610054148
695	0.6519097	0.9448	0.615924285
700	0.6550152	0.9517	0.623377966
705	0.6550279	0.9586	0.627909745
710	0.6532206	0.9655	0.630684489
715	0.6519608	0.97304	0.634383937
720	0.655582	0.9793	0.642011453

725	0.6606097	0.9802	0.647529628
730	0.6597998	0.9828	0.648451243
735	0.6607249	0.98838	0.653047277
740	0.6607033	0.9931	0.656144447
745	0.6592866	0.99719	0.657434005
750	0.6627008	1	0.6627008
755	0.663164	1	0.663164
760	0.6647662	1	0.6647662
765	0.6655481	1	0.6655481
770	0.6690727	1	0.6690727
775	0.6706082	0.99814	0.669360869
780	0.6732673	0.9966	0.670978191
785	0.6717792	0.99543	0.668709169
790	0.6729274	0.9945	0.669226299
795	0.6741192	0.9938	0.669939661
800	0.6752137	0.9931	0.670554725
805	0.6737072	0.9862	0.664410041
810	0.6752388	0.9793	0.661261357
815	0.6753846	0.97283	0.6570344
820	0.6786272	0.9655	0.655214562
825	0.6769109	0.95515	0.646551446
830	0.6746795	0.9448	0.637437192
835	0.68	0.93402	0.6351336
840	0.6787252	0.9241	0.627209957
845	0.6794987	0.9172	0.623236208
850	0.6704225	0.9103	0.610285602
855	0.6715686	0.86334	0.579792035
860	0.6516393	0.8	0.52131144
865	0.64155	0.72848	0.467356344
870	0.6345063	0.6552	0.415728528
875	0.646356	0.58016	0.374989897
880	0.6513076	0.5034	0.327868246
885	0.6577181	0.42523	0.279681468
890	0.6571429	0.3448	0.226582872
895	0.6480362	0.25704	0.166571225
900	0.6282051	0.175	0.109935893
905	0.6233333	0.11009	0.068622763
910	0.6241259	0.0621	0.038758218
915	0.6526509	0.043125	0.02814557
920	0.6508539	0.0276	0.017963568
925	0.6666666	0.015525	0.010349999
930	0.672956	0.0069	0.004643396
935	0.6726058	0	0
940	0.6774942	0	0
945	0.6723716	0	0
950	0.6899225	0	0
<b>SUM:</b>		32.10353915	
<b>Tnvg(SUM/NVG):</b>		0.659230271	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - TEXSTARS

**Manufactured:** N/A

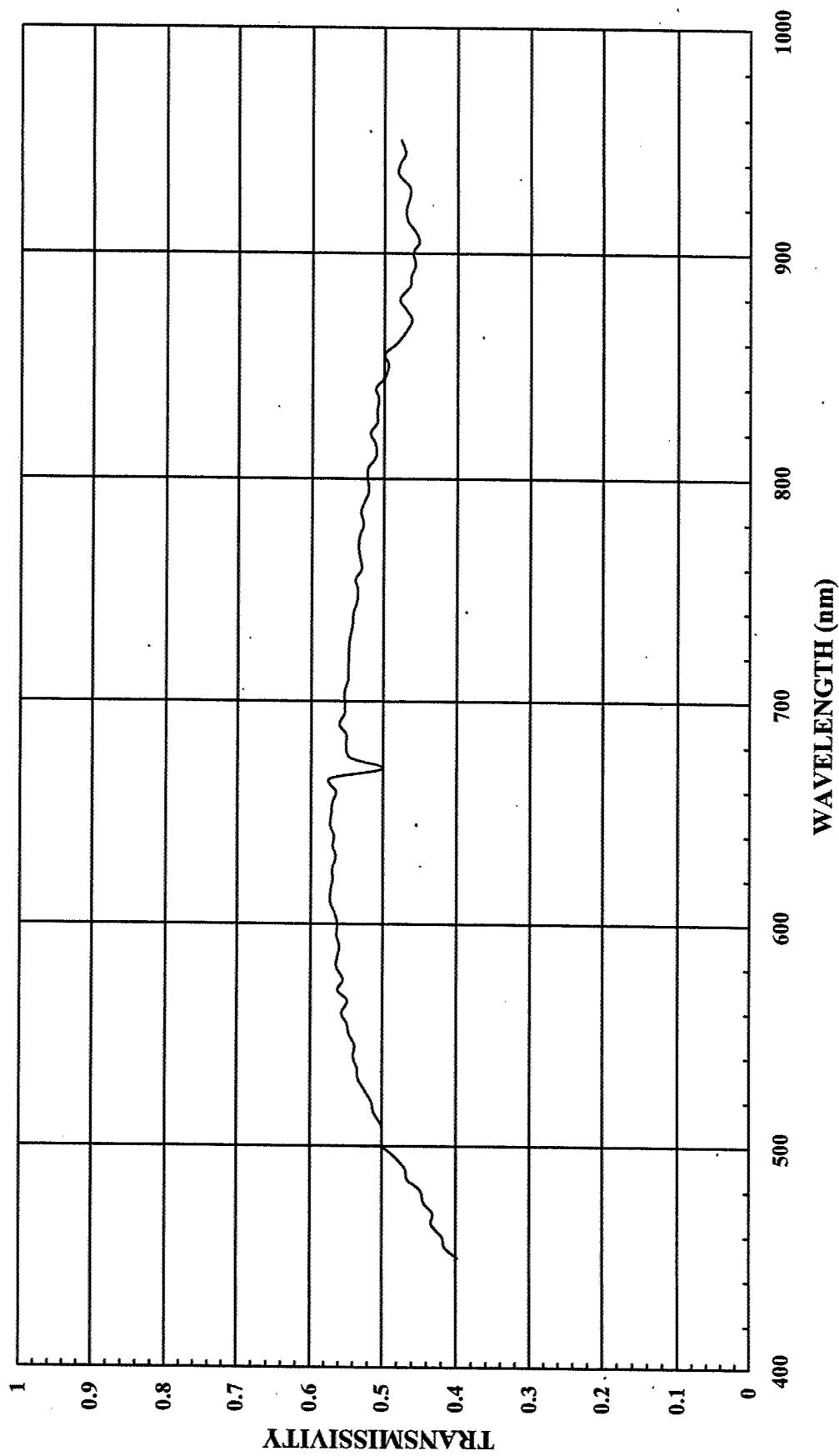
**S/N#** S-15 @ 60 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (TEXSTARS, GOLD COAT, SOLAR, S/N# S-15) @ 60 DEGREES  
T<sub>avg</sub> = 53%



**COUPON, TEXSTARS, GOLD COAT, SOLAR, S/N# S-15 @ 60 DEG**

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
	READING	"NVIS A"	
450	0.3981043	0.0001	3.98104E-05
455	0.4147982	0.0001125	4.66648E-05
460	0.4190871	0.000123	5.15477E-05
465	0.4332688	0.0001375	5.95745E-05
470	0.4317757	0.00015	6.47664E-05
475	0.443447	0.00016172	7.17142E-05
480	0.4483925	0.000175	7.84687E-05
485	0.4654605	0.00019375	9.0183E-05
490	0.4688474	0.0002125	9.96301E-05
495	0.4834055	0.00022266	0.000107635
500	0.4993047	0.0002375	0.000118585
505	0.5	0.00027656	0.00013828
510	0.5013812	0.0003125	0.000156682
515	0.5116883	0.00034279	0.000175402
520	0.515006	0.000375	0.000193127
525	0.523322	0.00041875	0.000219141
530	0.5334101	0.0004625	0.000246702
535	0.5345622	0.00050703	0.000271039
540	0.5399325	0.00055	0.000296963
545	0.5384615	0.00058359	0.000314241
550	0.5460993	0.000625	0.000341312
555	0.5486726	0.0007	0.000384071
560	0.5563042	0.000775	0.000431136
565	0.5486562	0.00085	0.000466358
570	0.5619389	0.000925	0.000519793
575	0.5546806	0.0014525	0.000805674
580	0.5637931	0.00198	0.00111631
585	0.5627669	0.0047175	0.002654853
590	0.5598006	0.0078	0.004366445
595	0.5635793	0.0114	0.006424804
600	0.5626822	0.015	0.008440233
605	0.5666434	0.026263	0.014881756
610	0.5727337	0.052	0.029782152
615	0.5722628	0.088388	0.050581164
620	0.5693816	0.175	0.09964178
625	0.5703422	0.43288	0.246889732
630	0.5651526	0.6138	0.346890666
635	0.5693642	0.67756	0.385778407
640	0.5678322	0.7448	0.422921423
645	0.5730875	0.82458	0.472556491
650	0.5712357	0.8897	0.508228402
655	0.5697212	0.89654	0.510777845
660	0.5647226	0.9034	0.510170397
665	0.5734633	0.91051	0.522144069
670	0.5	0.9172	0.4586
675	0.5450382	0.92241	0.502748686
680	0.5508475	0.9276	0.510966141
685	0.5506493	0.93254	0.513502498
690	0.5604396	0.9379	0.525636301
695	0.5531101	0.9448	0.522578422
700	0.5536013	0.9517	0.526862357
705	0.553323	0.9586	0.530415428
710	0.5485262	0.9655	0.529602046
715	0.5481682	0.97304	0.533389585
720	0.547666	0.9793	0.536329314

725	0.5473411	0.9802	0.536503746
730	0.5455137	0.9828	0.536130864
735	0.5422951	0.98838	0.535993631
740	0.5416949	0.9931	0.537957205
745	0.5367498	0.99719	0.535241533
750	0.5355049	1	0.5355049
755	0.5387076	1	0.5387076
760	0.5303314	1	0.5303314
765	0.5330883	1	0.5330883
770	0.5348274	1	0.5348274
775	0.5330451	0.99814	0.532053636
780	0.5280254	0.9966	0.526230114
785	0.5313553	0.99543	0.528927006
790	0.5262784	0.9945	0.523383869
795	0.5208333	0.9938	0.517604134
800	0.5226563	0.9931	0.519049972
805	0.5215311	0.9862	0.514333971
810	0.5112721	0.9793	0.500688768
815	0.5121747	0.97283	0.498258913
820	0.5187714	0.9655	0.500873787
825	0.5094664	0.95515	0.486616832
830	0.5100437	0.9448	0.481889288
835	0.5076646	0.93402	0.47416889
840	0.5117371	0.9241	0.472896254
845	0.4995131	0.9172	0.458153415
850	0.4943705	0.9103	0.450025466
855	0.4994676	0.86334	0.431210358
860	0.4832215	0.8	0.3865772
865	0.471831	0.72848	0.343719447
870	0.4623921	0.6552	0.302959304
875	0.4702843	0.58016	0.272840139
880	0.4787962	0.5034	0.241026007
885	0.4648094	0.42523	0.197650901
890	0.4634526	0.3448	0.159798456
895	0.4575163	0.25704	0.11759999
900	0.4605955	0.175	0.080604213
905	0.4525548	0.11009	0.049821758
910	0.4580153	0.0621	0.02844275
915	0.4683794	0.043125	0.020198862
920	0.4699793	0.0276	0.012971429
925	0.4656653	0.015525	0.007229454
930	0.4655963	0.0069	0.003212614
935	0.4804878	0	0
940	0.4785894	0	0
945	0.4710526	0	0
950	0.4772727	0	0
<b>SUM:</b>		25.83596998	
<b>Tnvg(SUM/NVG):</b>		0.530528844	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - PILKINGTON

**Manufactured:** N/A

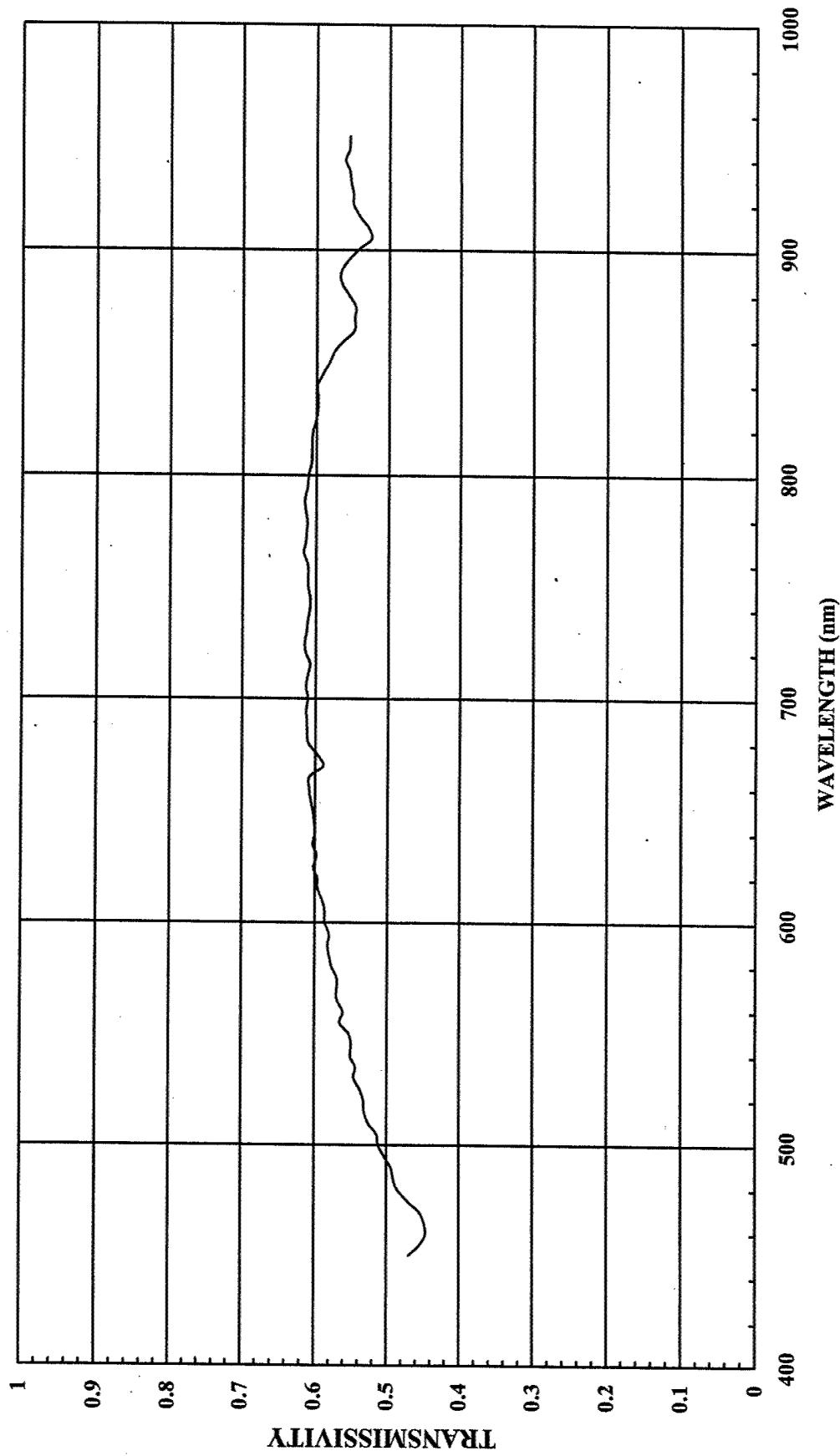
**S/N#** S-21 @ 65 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (PILKINGTON, GOLD COAT, SOLAR, S/N# S-21) @ 65 DEGREES  
 $T_{avg} = 60\%$



**COUPON, PILKINGTON, GOLD COAT, SOLAR, S/N# S-21 @ 65 DEG**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	
READING	"NVIS A"	SPECTRAL	RESPONSE
450	0.4696262	0.0001	4.69626E-05
455	0.4545454	0.0001125	5.11364E-05
460	0.4462475	0.000123	5.48884E-05
465	0.4484733	0.0001375	6.16651E-05
470	0.4547135	0.00015	6.8207E-05
475	0.4706927	0.00016172	7.61204E-05
480	0.4855688	0.000175	8.49745E-05
485	0.4909688	0.00019375	9.51252E-05
490	0.4937695	0.0002125	0.000104926
495	0.5043352	0.00022266	0.000112295
500	0.5117891	0.0002375	0.00012155
505	0.5138504	0.00027656	0.00014211
510	0.525	0.0003125	0.000164063
515	0.5314136	0.00034279	0.000182163
520	0.5321212	0.000375	0.000199545
525	0.5370582	0.00041875	0.000224893
530	0.545977	0.0004625	0.000252514
535	0.5437788	0.00050703	0.000275712
540	0.5503963	0.00055	0.000302718
545	0.5494155	0.00058359	0.000320633
550	0.5530839	0.000625	0.000345677
555	0.5650887	0.0007	0.000395562
560	0.5609284	0.000775	0.00043472
565	0.5691589	0.00085	0.000483785
570	0.5693693	0.000925	0.000526667
575	0.5691769	0.0014525	0.000826729
580	0.5769896	0.00198	0.001142439
585	0.5803955	0.0047175	0.002738016
590	0.5823529	0.0078	0.004542353
595	0.5801588	0.0114	0.00661381
600	0.5861561	0.015	0.008792342
605	0.5863284	0.026263	0.015398743
610	0.5893993	0.052	0.030648764
615	0.596337	0.088388	0.052709035
620	0.5966641	0.175	0.104416218
625	0.6021505	0.43288	0.260658908
630	0.5978916	0.6138	0.366985864
635	0.6030702	0.67756	0.408616245
640	0.6002825	0.7448	0.447090406
645	0.6009615	0.82458	0.495540834
650	0.6032609	0.8897	0.536721223
655	0.6061828	0.89654	0.543467128
660	0.6080114	0.9034	0.549277499
665	0.6077098	0.91051	0.55332585
670	0.5892857	0.9172	0.540492844
675	0.596875	0.92241	0.550563469
680	0.6098266	0.9276	0.565675154
685	0.6114058	0.93254	0.570160365
690	0.6116071	0.9379	0.573626299
695	0.6129032	0.9448	0.579070943
700	0.6108291	0.9517	0.581326054
705	0.6131558	0.9586	0.58777115
710	0.6113952	0.9655	0.590302066
715	0.6076818	0.97304	0.591298699
720	0.6135458	0.9793	0.600845402

725	0.6153342	0.9802	0.603150583
730	0.6129032	0.9828	0.602361265
735	0.6108537	0.98838	0.60375558
740	0.6086361	0.9931	0.604436511
745	0.6077763	0.99719	0.606068449
750	0.610596	1	0.610596
755	0.6107513	1	0.6107513
760	0.6108654	1	0.6108654
765	0.6169154	1	0.6169154
770	0.6142945	1	0.6142945
775	0.6131841	0.99814	0.612043578
780	0.6119691	0.9966	0.609888405
785	0.6148098	0.99543	0.612000119
790	0.6151646	0.9945	0.611781195
795	0.6122754	0.9938	0.608479293
800	0.610675	0.9931	0.606461343
805	0.6070853	0.9862	0.598707523
810	0.6063312	0.9793	0.593780144
815	0.6059322	0.97283	0.589469022
820	0.6047904	0.9655	0.583925131
825	0.6006944	0.95515	0.573753256
830	0.5984183	0.9448	0.56538561
835	0.5979946	0.93402	0.558538916
840	0.5992438	0.9241	0.553761196
845	0.5923753	0.9172	0.543326625
850	0.5823045	0.9103	0.530071786
855	0.5758547	0.86334	0.497158397
860	0.5634119	0.8	0.45072952
865	0.5487661	0.72848	0.399765129
870	0.5479453	0.6552	0.359013761
875	0.5466322	0.58016	0.317134137
880	0.5549525	0.5034	0.279363089
885	0.5659824	0.42523	0.240672696
890	0.5669782	0.3448	0.195494083
895	0.5588235	0.25704	0.143639992
900	0.5421053	0.175	0.094868428
905	0.5253623	0.11009	0.057837136
910	0.5293006	0.0621	0.032869567
915	0.5404339	0.043125	0.023306212
920	0.55	0.0276	0.01518
925	0.5500001	0.015525	0.008538752
930	0.5535308	0.0069	0.003819363
935	0.5552825	0	0
940	0.5609137	0	0
945	0.5555555	0	0
950	0.5546219	0	0
<b>SUM:</b>		29.27973185	
<b>T<sub>nv</sub>g(SUM/NVG):</b>		0.601244788	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - SIERRACIN

**Manufactured:** N/A

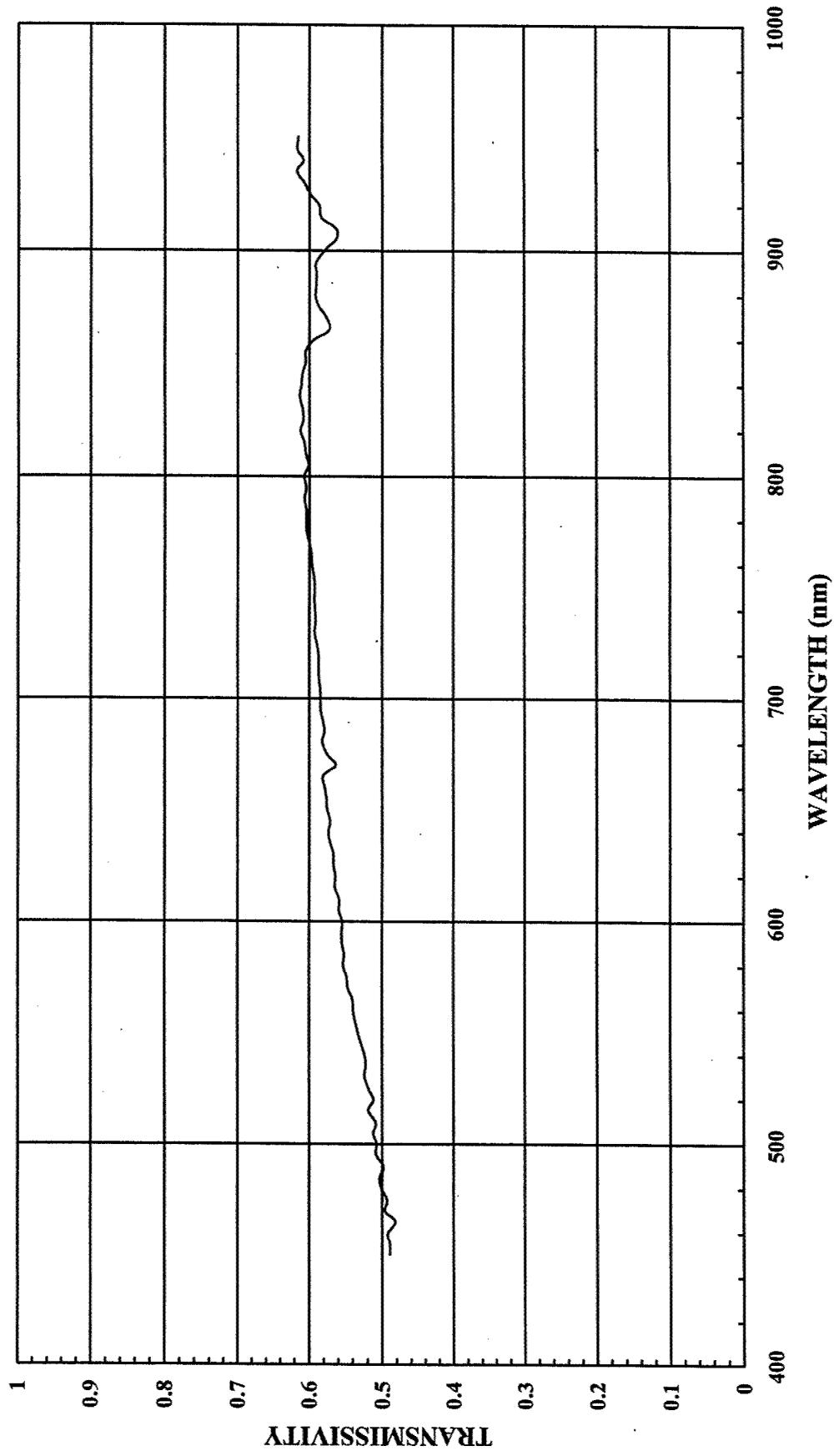
**S/N#** S-16 @ 65 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (SIERRACIN, GOLD COAT, SOLAR, S/N# S-16) @ 65 DEGREES  
 $T_{avg} = 59\%$



COUPON, SIERRACIN, GOLD COAT, SOLAR, S/N# S-16 @ 65 DEG			
	<u>SPECTRA-</u> <u>RADIOMETRIC</u>	<u>RELATIVE</u> <u>SPECTRAL SENSITIVITY</u>	<u>NVG</u> <u>SPECTRAL</u>
<u>WAVELENGTH(nm)</u>	<u>READING</u>	<u>"NVIS A"</u>	<u>RESPONSE</u>
450	0.4894027	0.0001	4.89403E-05
455	0.489011	0.0001125	5.50137E-05
460	0.49236	0.000123	6.05603E-05
465	0.4818326	0.0001375	6.6252E-05
470	0.4961241	0.00015	7.44186E-05
475	0.4932936	0.00016172	7.97754E-05
480	0.5014245	0.000175	8.77493E-05
485	0.5034578	0.00019375	9.75449E-05
490	0.4980392	0.0002125	0.000105833
495	0.5085574	0.00022266	0.000113235
500	0.5076023	0.0002375	0.000120556
505	0.5123675	0.00027656	0.0001417
510	0.5088339	0.0003125	0.000159011
515	0.5190157	0.00034279	0.000177913
520	0.5118191	0.000375	0.000191932
525	0.518591	0.00041875	0.00021716
530	0.5240905	0.0004625	0.000242392
535	0.5227273	0.00050703	0.000265038
540	0.5237634	0.00055	0.00028807
545	0.5292504	0.00058359	0.000308865
550	0.533392	0.000625	0.00033337
555	0.5370212	0.0007	0.000375915
560	0.5394295	0.000775	0.000418058
565	0.5408246	0.00085	0.000459701
570	0.547022	0.000925	0.000505995
575	0.5484363	0.0014525	0.000796604
580	0.5534639	0.00198	0.001095859
585	0.5520599	0.0047175	0.002604343
590	0.5549853	0.0078	0.004328885
595	0.5554017	0.0114	0.006331579
600	0.5550547	0.015	0.008325821
605	0.5594059	0.026263	0.014691677
610	0.5591133	0.052	0.029073892
615	0.5648267	0.088388	0.049923902
620	0.564	0.175	0.0987
625	0.5666218	0.43288	0.245279245
630	0.5667989	0.6138	0.347901165
635	0.5711526	0.67756	0.386990156
640	0.5739239	0.7448	0.427458521
645	0.5711679	0.82458	0.470973627
650	0.5756302	0.8897	0.512138189
655	0.5764218	0.89654	0.516785201
660	0.578481	0.9034	0.522599735
665	0.5807771	0.91051	0.528803357
670	0.5637255	0.9172	0.517049029
675	0.5753804	0.92241	0.530736635
680	0.5821475	0.9276	0.540000021
685	0.5793839	0.93254	0.540298662
690	0.5809335	0.9379	0.54485753
695	0.5842014	0.9448	0.551953483
700	0.5843465	0.9517	0.550122504
705	0.5851955	0.9586	0.560968406
710	0.5868575	0.9655	0.566610916
715	0.5870098	0.97304	0.571184016
720	0.5872922	0.9793	0.575135251

725	0.5896835	0.9802	0.578007767
730	0.5927016	0.9828	0.582507132
735	0.5912062	0.98838	0.584336384
740	0.592227	0.9931	0.588140634
745	0.5928659	0.99719	0.591199947
750	0.5925044	1	0.5925044
755	0.5936952	1	0.5936952
760	0.5963511	1	0.5963511
765	0.5973154	1	0.5973154
770	0.6002221	1	0.6002221
775	0.6036036	0.99814	0.602480897
780	0.6039605	0.9966	0.601907034
785	0.6042945	0.99543	0.601532874
790	0.6068652	0.9945	0.603527441
795	0.604336	0.9938	0.600589117
800	0.6068376	0.9931	0.602650421
805	0.600874	0.9862	0.592581939
810	0.6047024	0.9793	0.59218506
815	0.6069231	0.97283	0.590432999
820	0.6123245	0.9655	0.591199305
825	0.6083531	0.95515	0.581068463
830	0.6089744	0.9448	0.575359013
835	0.6133333	0.93402	0.572865569
840	0.6106805	0.9241	0.56432985
845	0.6096687	0.9172	0.559188132
850	0.6046948	0.9103	0.550453676
855	0.604902	0.86334	0.522236093
860	0.5952869	0.8	0.47622952
865	0.5726588	0.72848	0.417170483
870	0.5766175	0.6552	0.377799786
875	0.5866189	0.58016	0.340332821
880	0.5915318	0.5034	0.297777108
885	0.590604	0.42523	0.251142539
890	0.59	0.3448	0.203432
895	0.5906344	0.25704	0.151816666
901	0.5756097	0.175	0.100731698
905	0.5633333	0.11009	0.062017363
910	0.562937	0.0621	0.034958388
915	0.583181	0.043125	0.025149681
920	0.5863378	0.0276	0.016182923
925	0.5988024	0.015525	0.009296407
930	0.6058701	0.0069	0.004180504
935	0.6169265	0	0
940	0.6078886	0	0
945	0.6161369	0	0
950	0.6149871	0	0
<b>SUM:</b>		28.8117991	
<b>Tnvg(SUM/NVG):</b>		0.59163602	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - TEXSTARS

**Manufactured:** N/A

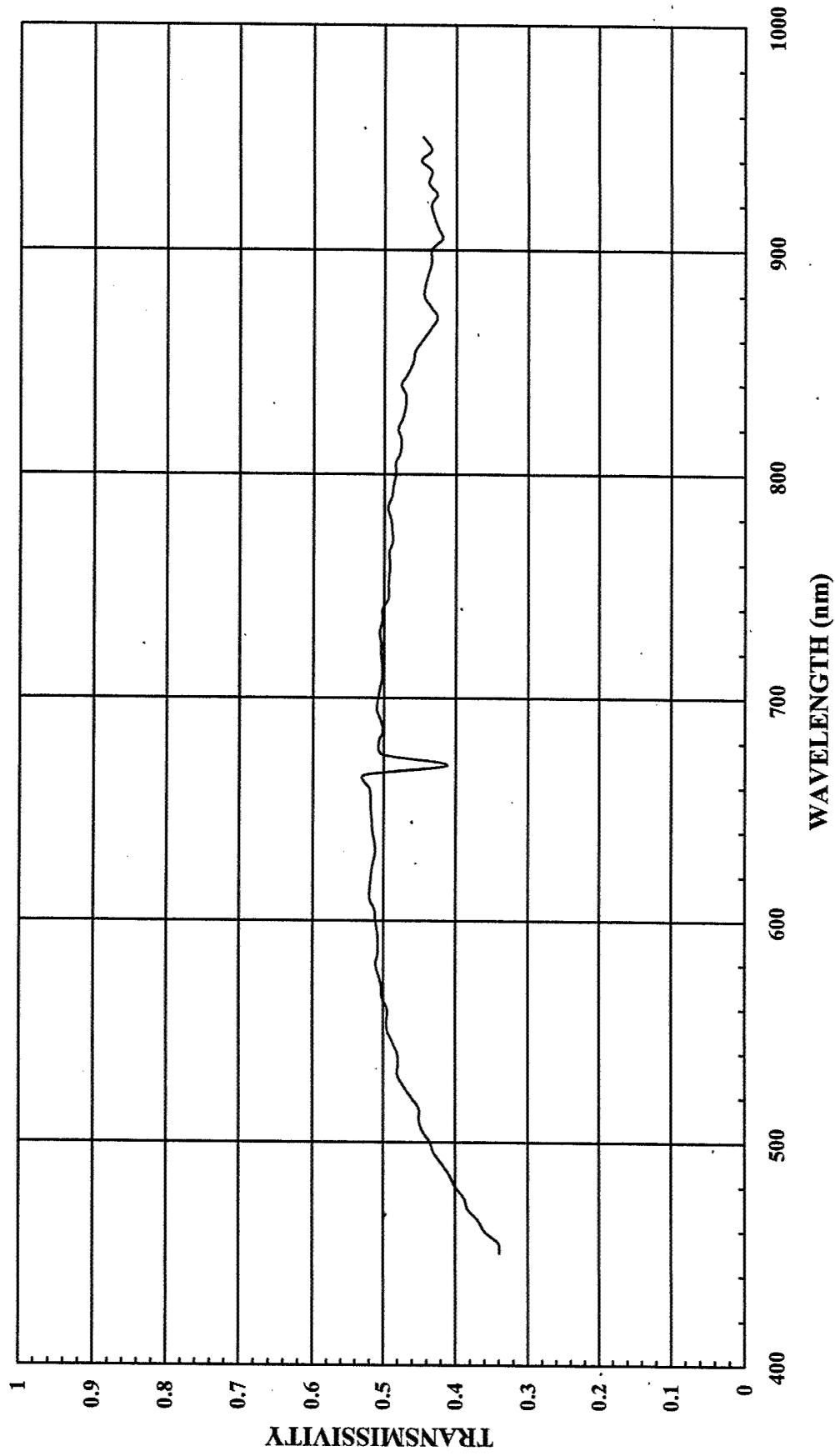
**S/N#** S-15 @ 65 Degrees

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (TEXSTARS, GOLD COAT, SOLAR, S/N# S-15) @ 65 DEGREES  
T<sub>avg</sub> = 49%



COUPON, TEXSTARS, GOLD COAT, SOLAR, S/N# S-15 @ 65 DEG			
WAVELENGTH(nm)	SPECTRA- RADIOMETRIC READING	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
450	0.3388625	0.0001	3.38863E-05
455	0.3408072	0.0001125	3.83408E-05
460	0.3589212	0.000123	4.41473E-05
465	0.3694391	0.0001375	5.07979E-05
470	0.3831776	0.00015	5.74766E-05
475	0.3877917	0.00016172	6.27137E-05
480	0.4010152	0.000175	7.01777E-05
485	0.4078947	0.00019375	7.90296E-05
490	0.4174455	0.0002125	8.87072E-05
495	0.4300144	0.00022266	9.5747E-05
500	0.4353268	0.0002375	0.00010339
505	0.4455307	0.00027656	0.000123216
510	0.4502762	0.0003125	0.000140711
515	0.4506493	0.00034279	0.000154478
520	0.4609844	0.000375	0.000172869
525	0.4709898	0.00041875	0.000197227
530	0.4804147	0.0004625	0.000222192
535	0.4792627	0.00050703	0.000243001
540	0.480315	0.00055	0.000264173
545	0.487882	0.00058359	0.000284723
550	0.4944276	0.000625	0.000309017
555	0.4955752	0.0007	0.000346903
560	0.4947065	0.000775	0.000383398
565	0.502317	0.00085	0.000426969
570	0.5026929	0.000925	0.000464991
575	0.5065617	0.0014525	0.000735781
580	0.5112069	0.00198	0.00101219
585	0.5081127	0.0047175	0.002397022
590	0.5074751	0.0078	0.003958306
595	0.5086343	0.0114	0.005798431
600	0.5116618	0.015	0.007674927
605	0.51291	0.026263	0.013470555
610	0.5200281	0.052	0.027041461
615	0.519708	0.088388	0.045935951
620	0.5180995	0.175	0.090667413
625	0.5163499	0.43288	0.223517545
630	0.5122859	0.6138	0.314441085
635	0.5130058	0.67756	0.34759221
640	0.5160839	0.7448	0.384379289
645	0.5170765	0.82458	0.42637094
650	0.5185685	0.8897	0.461370394
655	0.5185923	0.89654	0.464938741
660	0.5206259	0.9034	0.470333438
665	0.5284857	0.91051	0.481191515
670	0.4117647	0.9172	0.377670583
675	0.5022901	0.92241	0.463317411
680	0.5070621	0.9276	0.470350804
685	0.5012987	0.93254	0.46748109
690	0.5043956	0.9379	0.473072633
695	0.5100479	0.9448	0.481893256
700	0.5083752	0.9517	0.483820678
705	0.5054096	0.9586	0.484485643
710	0.5025162	0.9655	0.485179391
715	0.5027137	0.97304	0.489160539
720	0.5042735	0.9793	0.493835039

725	0.5038911	0.9802	0.493914056
730	0.506502	0.9828	0.497790166
735	0.5022951	0.98838	0.496458431
740	0.5023729	0.9931	0.498906527
745	0.4942683	0.99719	0.492879406
750	0.493811	1	0.493811
755	0.4932821	1	0.4932821
760	0.4921826	1	0.4921826
765	0.4932598	1	0.4932598
770	0.488189	1	0.488189
775	0.4891909	0.99814	0.488281005
780	0.4904459	0.9966	0.488778384
785	0.4949427	0.99543	0.492680812
790	0.4893466	0.9945	0.486655194
795	0.4873512	0.9938	0.484329623
800	0.4835938	0.9931	0.480257003
805	0.484051	0.9862	0.477371096
810	0.4774557	0.9793	0.467572367
815	0.4760705	0.97283	0.463135665
820	0.4803754	0.9655	0.463802449
825	0.4741824	0.95515	0.452915319
830	0.4707424	0.9448	0.44475742
835	0.4697926	0.93402	0.438795684
840	0.4760563	0.9241	0.439923627
845	0.4673808	0.9172	0.42868167
850	0.4595701	0.9103	0.418346662
855	0.456869	0.86334	0.394433282
860	0.4474273	0.8	0.35794184
865	0.4366197	0.72848	0.318068719
870	0.4266338	0.6552	0.279530466
875	0.4354005	0.58016	0.252601954
880	0.4445965	0.5034	0.223809878
885	0.4428152	0.42523	0.188298307
890	0.4385692	0.3448	0.15121866
895	0.4346405	0.25704	0.111719994
900	0.4343258	0.175	0.076007015
905	0.419708	0.11009	0.046205654
910	0.4255725	0.0621	0.026428052
915	0.43083	0.043125	0.018579544
920	0.4347826	0.0276	0.012
925	0.4270386	0.015525	0.006629774
930	0.4380734	0.0069	0.003022706
935	0.4341463	0	0
940	0.4483627	0	0
945	0.4342105	0	0
950	0.4460227	0	0
<b>SUM:</b>		23.77100545	
<b>T<sub>NVG</sub>(SUM/NVG):</b>		0.48812582	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - PILKINGTON

**Manufactured:** N/A

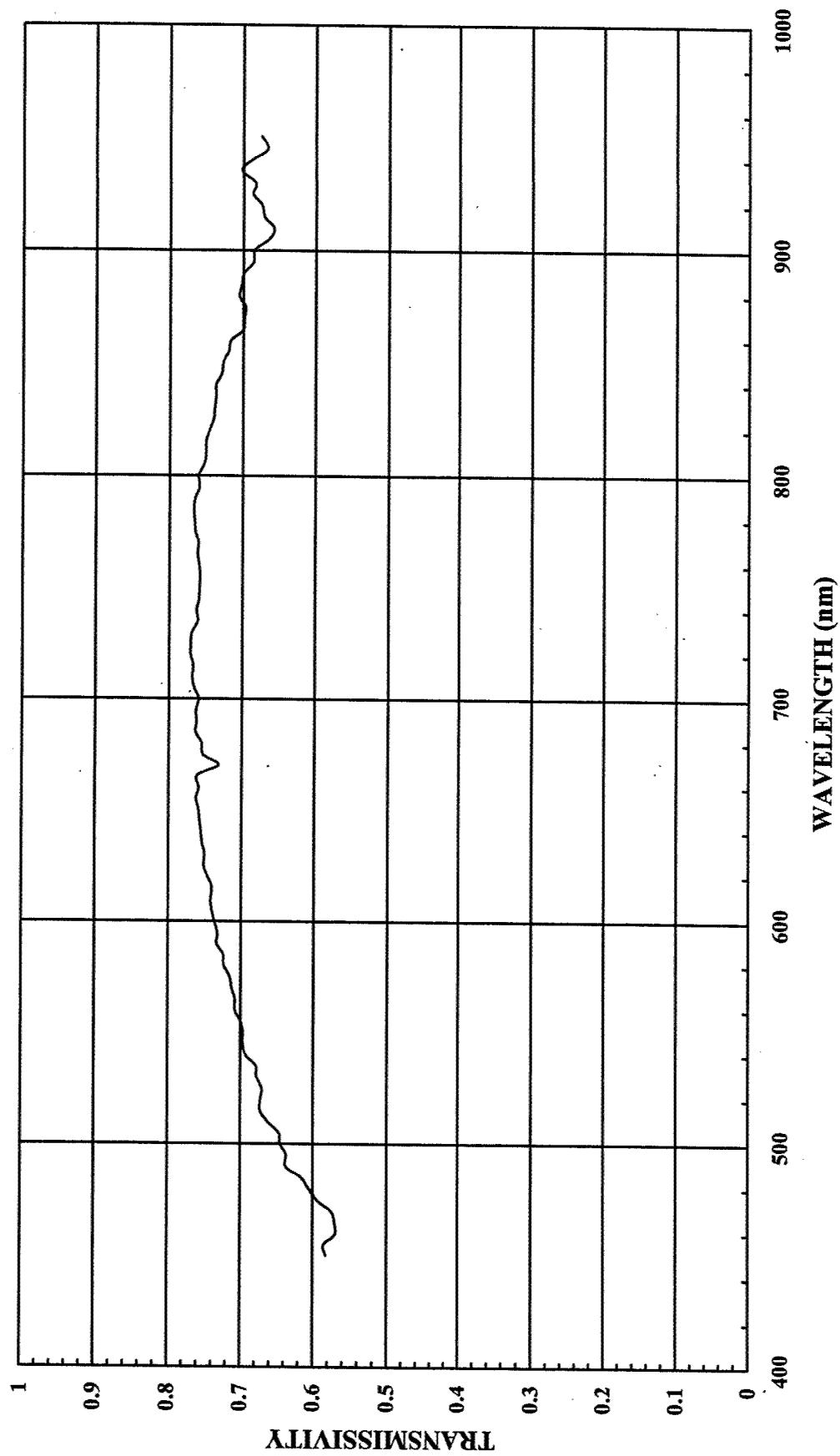
**S/N#** S-21 @ Normal

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (PILKINGTON, GOLD COAT, SOLAR, S/N# S-21) @ NORMAL  
 $T_{avg} = 75\%$



<b>COUPON, PILKINGTON, GOLD COAT, SOLAR, S/N# S-21 @ NORMAL</b>			
<b>WAVELENGTH(nm)</b>	<b>SPECTRA- RADIOMETRIC READING</b>	<b>RELATIVE SPECTRAL SENSITIVITY "NVIS A"</b>	<b>NVG SPECTRAL RESPONSE</b>
450	0.5817757	0.0001	5.81776E-05
455	0.5853658	0.0001125	6.58537E-05
460	0.5699797	0.000123	7.01075E-05
465	0.5706107	0.0001375	7.8459E-05
470	0.5748613	0.00015	8.62292E-05
475	0.5932505	0.00016172	9.59405E-05
480	0.6061121	0.000175	0.00010607
485	0.6157635	0.00019375	0.000119304
490	0.6370716	0.0002125	0.000135378
495	0.6372832	0.00022266	0.000141897
500	0.6449376	0.0002375	0.000153173
505	0.6468144	0.00027656	0.000178883
510	0.6638889	0.0003125	0.000207465
515	0.6727749	0.00034279	0.000230621
520	0.6727273	0.000375	0.000252273
525	0.6704676	0.00041875	0.000280758
530	0.6781609	0.0004625	0.000313649
535	0.6785715	0.00050703	0.000344056
540	0.6930917	0.00055	0.0003812
545	0.6971307	0.00058359	0.000406839
550	0.6966633	0.000625	0.000435415
555	0.7001972	0.0007	0.000490138
560	0.7079304	0.000775	0.000548646
565	0.7084112	0.00085	0.00060215
570	0.7126126	0.000925	0.000659167
575	0.7154115	0.0014525	0.001039135
580	0.7240484	0.00198	0.001433616
585	0.7248495	0.0047175	0.003419478
590	0.7336134	0.0078	0.005722185
595	0.7325397	0.0114	0.008350953
600	0.7371134	0.015	0.011056701
605	0.7406624	0.026263	0.019452017
610	0.7420495	0.052	0.038586574
615	0.7406594	0.088388	0.065465403
620	0.7467778	0.175	0.130686115
625	0.7519201	0.43288	0.325491173
630	0.750753	0.6138	0.460812191
635	0.7543859	0.67756	0.51114171
640	0.7556497	0.7448	0.562807897
645	0.7575549	0.82458	0.624664619
650	0.7595109	0.8897	0.675736848
655	0.7627688	0.89654	0.68385274
660	0.7589414	0.9034	0.685627661
665	0.7611489	0.91051	0.693033685
670	0.7321429	0.9172	0.671521468
675	0.753125	0.92241	0.694690031
680	0.7557804	0.9276	0.701061899
685	0.7639257	0.93254	0.712391272
690	0.7622768	0.9379	0.714939411
695	0.7634408	0.9448	0.721298868
700	0.7597292	0.9517	0.72303428
705	0.7658575	0.9586	0.734151
710	0.7684441	0.9655	0.741932779
715	0.7674897	0.97304	0.746798178
720	0.7709163	0.9793	0.754958333

725	0.7706422	0.9802	0.755383484
730	0.7695853	0.9828	0.756348433
735	0.7610853	0.98838	0.752241489
740	0.7628513	0.9931	0.757587626
745	0.7598909	0.99719	0.757755607
750	0.7589404	1	0.7589404
755	0.7584197	1	0.7584197
760	0.7593178	1	0.7593178
765	0.7618159	1	0.7618159
770	0.7603204	1	0.7603204
775	0.7649254	0.99814	0.763502639
780	0.7657658	0.9966	0.763162196
785	0.7669837	0.99543	0.763478584
790	0.7653791	0.9945	0.761169515
795	0.7597305	0.9938	0.755020171
800	0.7605965	0.9931	0.755348384
805	0.7536232	0.9862	0.7432232
810	0.7508117	0.9793	0.735269898
815	0.7508475	0.97283	0.730446973
820	0.7459368	0.9655	0.72020198
825	0.7404514	0.95515	0.707242155
830	0.7390158	0.9448	0.698222128
835	0.7374659	0.93402	0.6888079
840	0.7372401	0.9241	0.681283576
845	0.7302053	0.9172	0.669744301
850	0.7273663	0.9103	0.662121543
855	0.7200854	0.86334	0.621678529
860	0.7171717	0.8	0.57373736
865	0.7003525	0.72848	0.510192789
870	0.6986302	0.6552	0.457742507
875	0.6968912	0.58016	0.404308399
880	0.7055631	0.5034	0.355180465
885	0.702346	0.42523	0.29865859
890	0.6993769	0.3448	0.241145155
895	0.6862745	0.25704	0.176399997
900	0.6842105	0.175	0.119736838
905	0.6648551	0.11009	0.073193898
910	0.657845	0.0621	0.040852175
915	0.6706114	0.043125	0.028920117
920	0.675	0.0276	0.01863
925	0.6869565	0.015525	0.010665
930	0.6833713	0.0069	0.004715262
935	0.7027027	0	0
940	0.6878172	0	0
945	0.6666666	0	0
950	0.67507	0	0
<b>SUM:</b>	<b>36.54373313</b>		
<b>Tnvg(SUM/NVG):</b>	<b>0.750407455</b>	<b>(SPECTRAL</b>	
		<b>TRANSMISSION</b>	
		<b>COEFFICIENT)</b>	

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - SIERRACIN

**Manufactured:** N/A

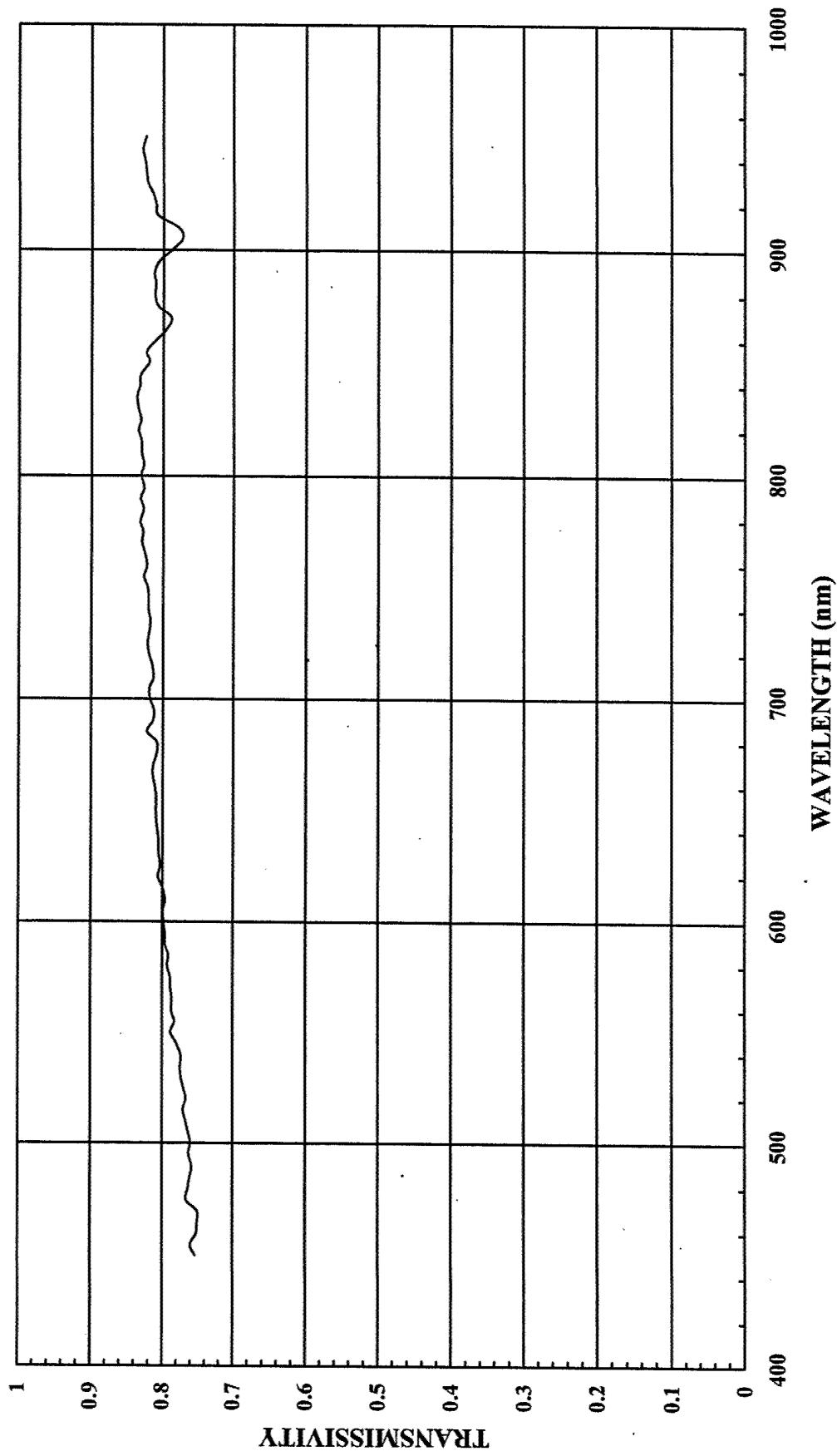
**S/N#** S-16 @ Normal

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (SIERRACIN, GOLD COAT, SOLAR, S/N# S-16) @ NORMAL  
 $T_{avg} = 82\%$



<u>COUPON, SIERRACIN, GOLD COAT, SOLAR, S/N# S-16 @ NORMAL</u>			
WAVELENGTH(nm)	SPECTRA- RADIOMETRIC READING	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
450	0.7533718	0.0001	7.53372E-05
455	0.7600732	0.0001125	8.55082E-05
460	0.7521222	0.000123	9.2511E-05
465	0.750395	0.0001375	0.000103179
470	0.7503876	0.00015	0.000112558
475	0.7660209	0.00016172	0.000123881
480	0.7635328	0.000175	0.000133618
485	0.7607192	0.00019375	0.000147389
490	0.7581699	0.0002125	0.000161111
495	0.7628362	0.00022266	0.000169853
500	0.7602339	0.0002375	0.000180556
505	0.7632509	0.00027656	0.000211085
510	0.7667844	0.0003125	0.00023962
515	0.7706935	0.00034279	0.000264186
520	0.7667009	0.000375	0.000287513
525	0.7700587	0.00041875	0.000322462
530	0.7738446	0.0004625	0.000357903
535	0.7747035	0.00050703	0.000392798
540	0.7740058	0.00055	0.000425703
545	0.7806216	0.00058359	0.000455563
550	0.7882249	0.000625	0.000492641
555	0.7829787	0.0007	0.000548085
560	0.7869127	0.000775	0.000609857
565	0.7865804	0.00085	0.000668593
570	0.7884013	0.000925	0.000729271
575	0.788711	0.0014525	0.001145603
580	0.7929217	0.00198	0.001569985
585	0.7917603	0.0047175	0.003735129
590	0.7961877	0.0078	0.006210264
595	0.7963989	0.0114	0.009078947
600	0.7984546	0.015	0.011976819
605	0.7995049	0.026263	0.020997397
610	0.7961823	0.052	0.04140148
615	0.8003851	0.088388	0.070744438
620	0.8066667	0.175	0.141166673
625	0.8034993	0.43288	0.347818777
630	0.8055556	0.6138	0.494450027
635	0.8055376	0.67756	0.545800056
640	0.8072365	0.7448	0.601229745
645	0.8090024	0.82458	0.667087199
650	0.8097239	0.8897	0.720411354
655	0.8092417	0.89654	0.725517554
660	0.8107595	0.9034	0.732440132
665	0.813906	0.91051	0.741069552
670	0.8137255	0.9172	0.746349029
675	0.8091286	0.92241	0.746348312
680	0.8085382	0.9276	0.750000034
685	0.8222749	0.93254	0.766804235
690	0.8142999	0.9379	0.763731876
695	0.8124999	0.9448	0.767649906
700	0.8183891	0.9517	0.778860906
705	0.8191341	0.9586	0.785221948
710	0.8132726	0.9655	0.785214695
715	0.814951	0.97304	0.792979921
720	0.8194774	0.9793	0.802514218

725	0.8218054	0.9802	0.805533653
730	0.819894	0.9828	0.805791823
735	0.8175877	0.98838	0.808087331
740	0.8204812	0.9931	0.81481988
745	0.8204182	0.99719	0.818112825
750	0.8221297	1	0.8221297
755	0.8272038	1	0.8272038
760	0.8226909	1	0.8226909
765	0.8260627	1	0.8260627
770	0.8300944	1	0.8300944
775	0.8282658	0.99814	0.826725226
780	0.8322656	0.9966	0.829435897
785	0.8276074	0.99543	0.823825234
790	0.8316063	0.9945	0.827032465
795	0.8272358	0.9938	0.822106938
800	0.8311966	0.9931	0.825461343
805	0.8273853	0.9862	0.815967383
810	0.8302719	0.9793	0.813085272
815	0.8307692	0.97283	0.808197201
820	0.8346334	0.9655	0.805838548
825	0.8313633	0.95515	0.794076656
830	0.8349359	0.9448	0.788847438
835	0.8366666	0.93402	0.781463338
840	0.8329027	0.9241	0.769685385
845	0.831692	0.9172	0.762827902
850	0.8197183	0.9103	0.746189568
855	0.8235295	0.86334	0.710985959
860	0.8114755	0.8	0.6491804
865	0.7965555	0.72848	0.580274751
870	0.7888764	0.6552	0.516871817
875	0.8064516	0.58016	0.46787096
880	0.8119552	0.5034	0.408738248
885	0.8107383	0.42523	0.344750247
890	0.8128571	0.3448	0.280273128
895	0.8066465	0.25704	0.207340416
900	0.786859	0.175	0.137700325
905	0.7733333	0.11009	0.085136263
910	0.7777972	0.0621	0.048312061
915	0.8077634	0.043125	0.034834797
920	0.8102468	0.0276	0.022362812
925	0.8143712	0.015525	0.012643113
930	0.821803	0.0069	0.005670441
935	0.8240534	0	0
940	0.825986	0	0
945	0.8288508	0	0
950	0.8242894	0	0
<b>SUM:</b>		39.91115554	
<b>Tnvg(SUM/NVG):</b>		0.819555806	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - TEXSTARS

**Manufactured:** N/A

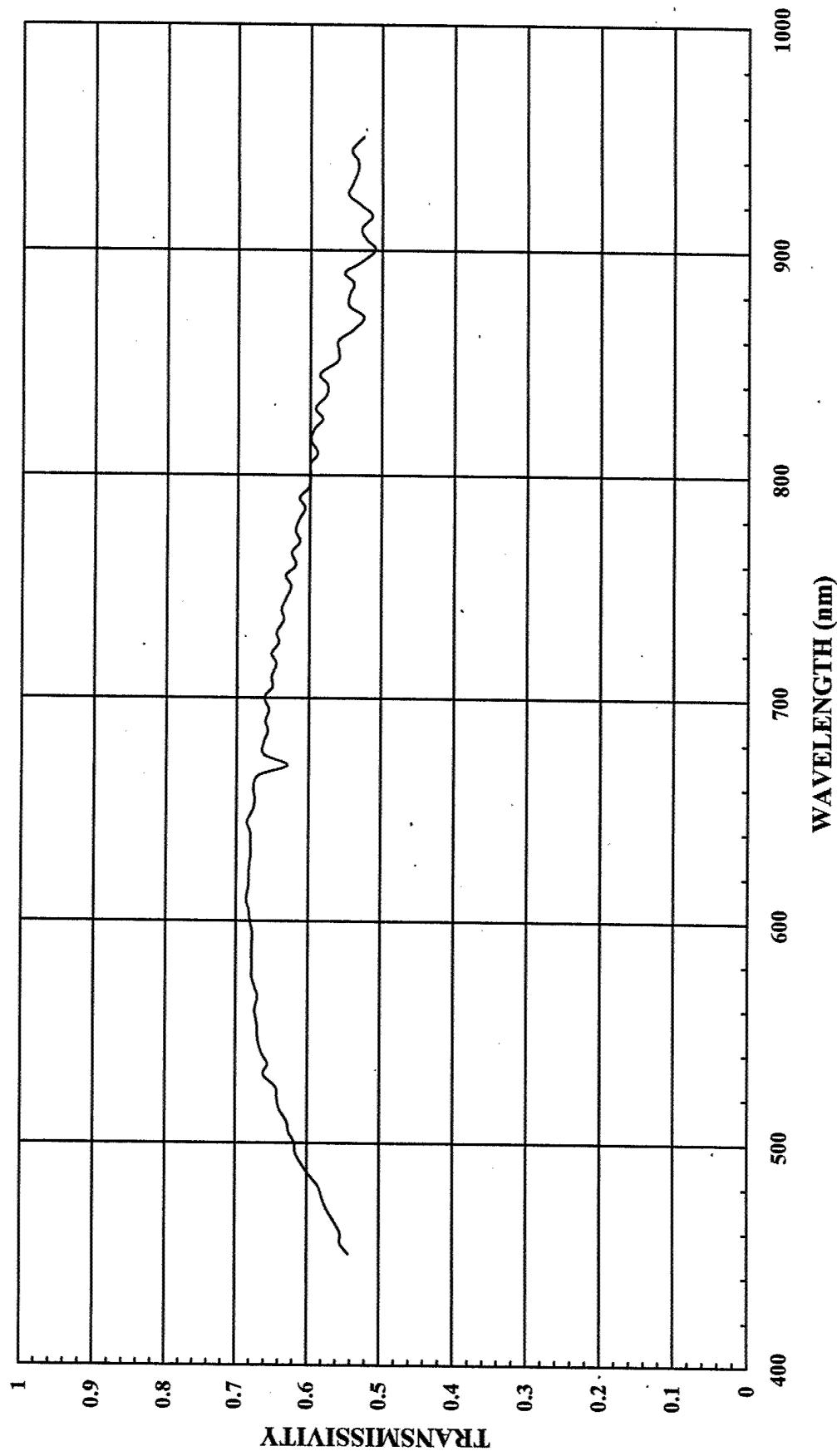
**S/N#** S-15 @ Normal

**Material Type:** Solar

**Construction:** N/A

**Coating:** Gold

COUPON (TEXSTARS, GOLD COAT, SOLAR, S/N# S-15) @ NORMAL  
 $T_{avg} = 62\%$



COUPON, TEXSTARS, GOLD COAT, SOLAR, S/N# S-15 @ NORMAL			
	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
WAVELENGTH(nm)	READING		
450	0.542654	0.0001	5.42654E-05
455	0.5538117	0.0001125	6.23038E-05
460	0.5539419	0.000123	6.81349E-05
465	0.5628627	0.0001375	7.73936E-05
470	0.5719627	0.00015	8.57944E-05
475	0.5780969	0.00016172	9.34898E-05
480	0.5837564	0.000175	0.000102157
485	0.5953947	0.00019375	0.000115358
490	0.605919	0.0002125	0.000128758
495	0.6161616	0.00022266	0.000137195
500	0.6175243	0.0002375	0.000146662
505	0.6256984	0.00027656	0.000173043
510	0.628453	0.0003125	0.000196392
515	0.638961	0.00034279	0.000219029
520	0.6422569	0.000375	0.000240846
525	0.6439136	0.00041875	0.000269639
530	0.6612903	0.0004625	0.000305847
535	0.655553	0.00050703	0.000332373
540	0.6636671	0.00055	0.000365017
545	0.6691254	0.00058359	0.000390495
550	0.6697062	0.000625	0.000418566
555	0.6715831	0.0007	0.000470108
560	0.6737248	0.000775	0.000522137
565	0.6700649	0.00085	0.000569555
570	0.6741472	0.000925	0.000623586
575	0.6780403	0.0014525	0.000984854
580	0.6775862	0.00198	0.001341621
585	0.678053	0.0047175	0.003198715
590	0.6777409	0.0078	0.005286379
595	0.6774691	0.0114	0.007723148
600	0.680758	0.015	0.01021137
605	0.6824843	0.026263	0.017924085
610	0.6858749	0.052	0.035665495
615	0.6832117	0.088388	0.060387716
620	0.6825038	0.175	0.119438165
625	0.6821293	0.43288	0.295280131
630	0.6798213	0.6138	0.417274314
635	0.6806358	0.67756	0.461171593
640	0.6804196	0.7448	0.506776518
645	0.6851093	0.82458	0.564927427
650	0.6772451	0.8897	0.602544965
655	0.6746348	0.89654	0.604837084
660	0.6763869	0.9034	0.611047925
665	0.6701649	0.91051	0.610191843
670	0.6294118	0.9172	0.577296503
675	0.6625955	0.92241	0.611184715
680	0.6624294	0.9276	0.614469511
685	0.6571429	0.93254	0.61281204
690	0.6604396	0.9379	0.619426301
695	0.6555024	0.9448	0.619318668
700	0.6616415	0.9517	0.629684216
705	0.6506956	0.9586	0.623756802
710	0.6520489	0.9655	0.629553213
715	0.6458616	0.97304	0.628449171
720	0.6522025	0.9793	0.638701908

725	0.6420233	0.9802	0.629311239
730	0.6449935	0.9828	0.633899612
735	0.6354098	0.98838	0.628026338
740	0.638644	0.9931	0.634237356
745	0.6325017	0.99719	0.63072437
750	0.6254072	1	0.6254072
755	0.6327575	1	0.6327575
760	0.619137	1	0.619137
765	0.625	1	0.625
770	0.6135676	1	0.6135676
775	0.6195182	0.99814	0.618365896
780	0.6159236	0.9966	0.61382946
785	0.606878	0.99543	0.604104568
790	0.6143466	0.9945	0.610967694
795	0.6011905	0.9938	0.597463119
800	0.5992187	0.9931	0.595084091
805	0.599681	0.9862	0.591405402
810	0.5893719	0.9793	0.577171902
815	0.5986565	0.97283	0.582391003
820	0.5947099	0.9655	0.574192408
825	0.5826162	0.95515	0.556485863
830	0.5921397	0.9448	0.559453589
835	0.5770965	0.93402	0.539019673
840	0.5755869	0.9241	0.531899854
845	0.5861734	0.9172	0.537638242
850	0.5619243	0.9103	0.51151969
855	0.5601704	0.86334	0.483617513
860	0.5604027	0.8	0.44832216
865	0.5399061	0.72848	0.393310796
870	0.5252774	0.6552	0.344161752
875	0.5452197	0.58016	0.316314661
880	0.5458277	0.5034	0.274769664
885	0.5395895	0.42523	0.229449643
890	0.5520995	0.3448	0.190363908
895	0.5294117	0.25704	0.136079983
900	0.5096322	0.175	0.089185635
905	0.5218979	0.11009	0.05745574
910	0.528626	0.0621	0.032827675
915	0.5139442	0.043125	0.022163844
920	0.5300207	0.0276	0.014628571
925	0.5472103	0.015525	0.00849544
930	0.5412844	0.0069	0.003734862
935	0.5341464	0	0
940	0.534005	0	0
945	0.5421053	0	0
950	0.5255682	0	0
<b>SUM:</b>		30.26497706	
<b>Tnvg(SUM/NVG):</b>		0.62147631	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon (Pilkington) @ 34 deg design eye

**Manufactured:** N/A

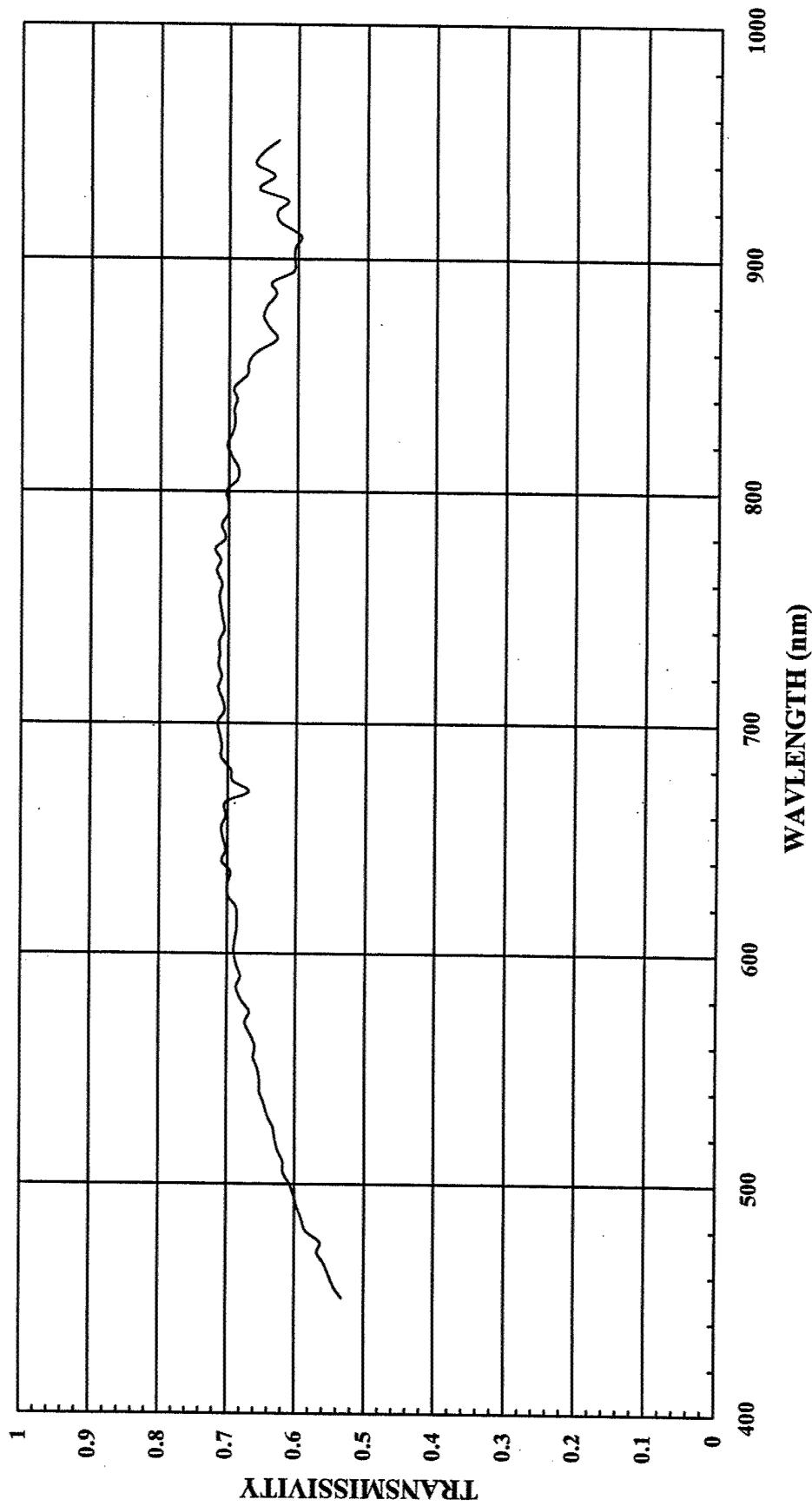
**S/N#** N/A

**Material Type:** N/A

**Construction:** N/A

**Coating:** Gold

COUPON (PILKINGTON, GOLD COAT, NO SERIAL NUMBER) @  
34 DEG DESIGN EYE  
 $T_{avg} = 70\%$



**COUPON, PILKINGTON, GOLD COAT, NO S/N#, @ 34 DEG DESIGN EYE**

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY	NVG SPECTRAL RESPONSE
	READING	"NVIS A"	
450	0.5321782	0.0001	5.32178E-05
455	0.5429864	0.0001125	6.1086E-05
460	0.5496829	0.000123	6.7611E-05
465	0.5576131	0.0001375	7.66718E-05
470	0.5668017	0.00015	8.50203E-05
475	0.5634616	0.00016172	9.1123E-05
480	0.5834897	0.000175	0.000102111
485	0.5905797	0.00019375	0.000114425
490	0.5966102	0.0002125	0.00012678
495	0.6012862	0.00022266	0.000133882
500	0.6082802	0.0002375	0.000144467
505	0.6173633	0.00027656	0.000170738
510	0.6177847	0.0003125	0.000193058
515	0.6251809	0.00034279	0.000214306
520	0.6296296	0.000375	0.000236111
525	0.6324111	0.00041875	0.000264822
530	0.6405406	0.0004625	0.00029625
535	0.6462766	0.00050703	0.000327682
540	0.6521739	0.00055	0.000358696
545	0.6520147	0.00058359	0.000380509
550	0.6552539	0.000625	0.000409534
555	0.6612149	0.0007	0.00046285
560	0.6586758	0.000775	0.000510474
565	0.6647982	0.00085	0.000565078
570	0.673224	0.000925	0.000622732
575	0.6673913	0.0014525	0.000969386
580	0.678453	0.00198	0.001343337
585	0.6866667	0.0047175	0.00323935
590	0.6809422	0.0078	0.005311349
595	0.686214	0.0114	0.00782284
600	0.6902655	0.015	0.010353983
605	0.6894531	0.026263	0.018107107
610	0.686747	0.052	0.035710844
615	0.6860707	0.088388	0.060640417
620	0.6876333	0.175	0.120335828
625	0.6993603	0.43288	0.302739087
630	0.7006173	0.6138	0.430038899
635	0.6955665	0.67756	0.471288038
640	0.7087378	0.7448	0.527867913
645	0.7025986	0.82458	0.579348754
650	0.7076923	0.8897	0.629633839
655	0.7090559	0.89654	0.635696977
660	0.7028689	0.9034	0.634971764
665	0.7036011	0.91051	0.6406355838
670	0.6697248	0.9172	0.614271587
675	0.6930693	0.92241	0.639294053
680	0.6958175	0.9276	0.645440313
685	0.7096774	0.93254	0.661802563
690	0.7090103	0.9379	0.66498076
695	0.7116402	0.9448	0.672357661
700	0.7154862	0.9517	0.680928217
705	0.7058823	0.9586	0.676658773
710	0.7080132	0.9655	0.683586745
715	0.7147506	0.97304	0.695480924
720	0.7097481	0.9793	0.695056314
725	0.7142857	0.9802	0.700142843
730	0.7127784	0.9828	0.700518612

735	0.7134072	0.98838	0.705117408
740	0.7061855	0.9931	0.70131282
745	0.7087629	0.99719	0.706771276
750	0.7119079	1	0.7119079
755	0.7133838	1	0.7133838
760	0.709799	1	0.709799
765	0.7175	1	0.7175
770	0.7117795	1	0.7117795
775	0.7194805	0.99814	0.718142266
780	0.704607	0.9966	0.702211336
785	0.7101449	0.99543	0.706899538
790	0.7016743	0.9945	0.697815091
795	0.7009494	0.9938	0.696603514
800	0.7033333	0.9931	0.6984803
805	0.687813	0.9862	0.678321181
810	0.6863407	0.9793	0.672133448
815	0.6964912	0.97283	0.677567534
820	0.702509	0.9655	0.67827244
825	0.6956521	0.95515	0.664452103
830	0.6913124	0.9448	0.653151956
835	0.6924565	0.93402	0.64676822
840	0.6886228	0.9241	0.636356329
845	0.6929461	0.9172	0.635570163
850	0.6739131	0.9103	0.613463095
855	0.6719818	0.86334	0.580148767
860	0.6611375	0.8	0.52891
865	0.6314496	0.72848	0.459998405
870	0.6412213	0.6552	0.420128196
875	0.6506667	0.58016	0.377490793
880	0.6464089	0.5034	0.32540224
885	0.6321839	0.42523	0.26882356
890	0.6382979	0.3448	0.220085116
895	0.6070287	0.25704	0.156030657
900	0.6054422	0.175	0.105952385
905	0.6043165	0.11009	0.066529203
910	0.5961539	0.0621	0.037021157
915	0.6260504	0.043125	0.026998424
920	0.6311111	0.0276	0.017418666
925	0.6157407	0.015525	0.009559374
930	0.6565657	0.0069	0.004530303
935	0.6349207	0	0
940	0.6611111	0	0
945	0.6529412	0	0
950	0.6289309	0	0
<b>SUM:</b>		33.91145161	
<b>T<sub>NVG</sub>(SUM/NVG):</b>		0.696354858	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon (Sierracin) @ 34 deg design eye

**Manufactured:** N/A

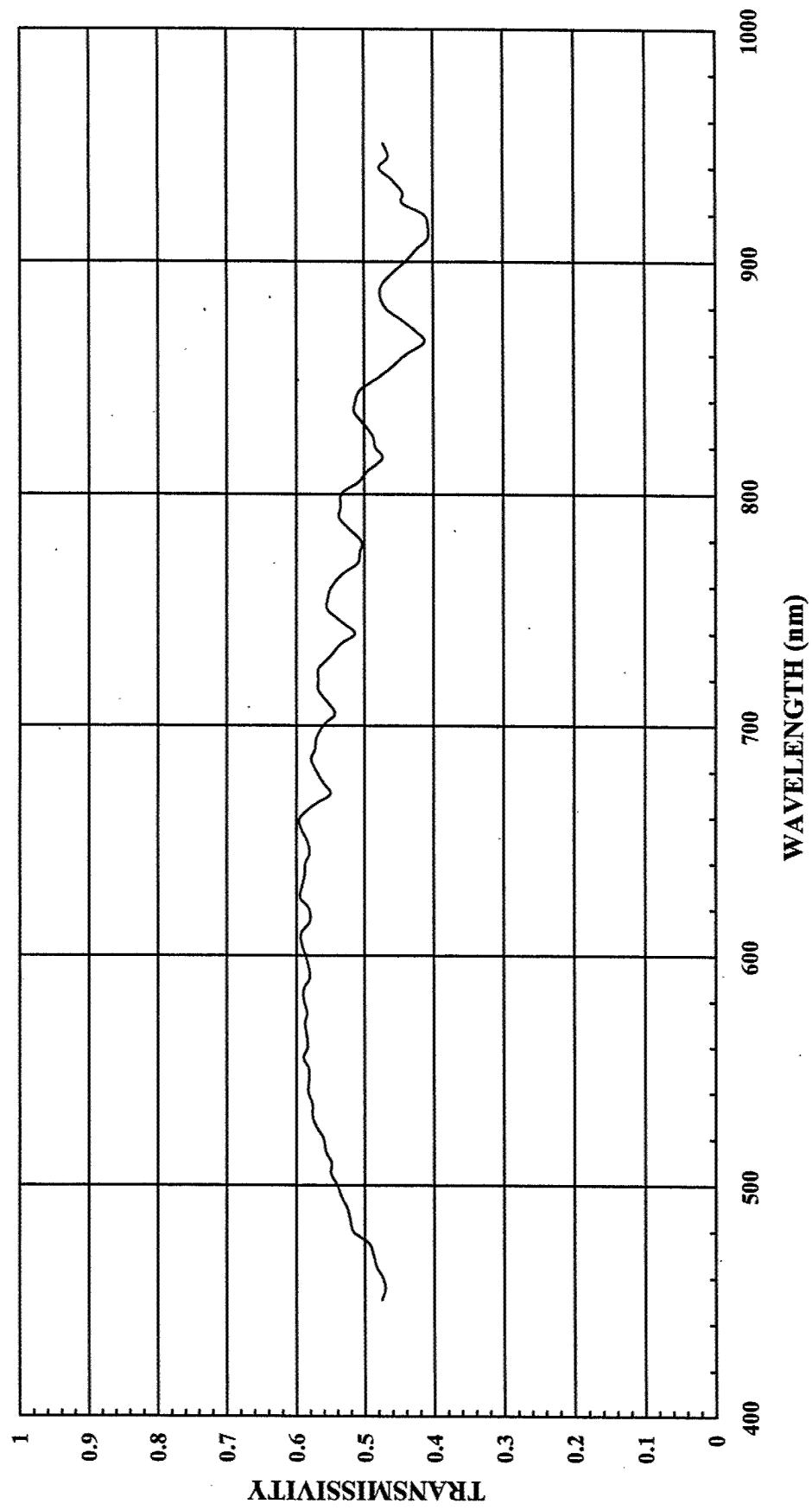
**S/N#** N/A

**Material Type:** N/A

**Construction:** N/A

**Coating:** Gold

COUPON (SIERRACIN, GOLD COAT, NO SERIAL NUMBER) @  
34 DEG DESIGN EYE  
 $T_{avg} = 53\%$



COUPON, SIERRACIN, GOLD COAT, NO S/N#, @ 34 DEG DESIGN EYE			
WAVELENGTH(nm)	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
	READING		
450	0.4752476	0.0001	4.75248E-05
455	0.4705883	0.0001125	5.29412E-05
460	0.473573	0.000123	5.82495E-05
465	0.4825462	0.0001375	6.63501E-05
470	0.4878543	0.00015	7.31781E-05
475	0.4942308	0.00016172	7.9927E-05
480	0.5159475	0.000175	9.02908E-05
485	0.5217391	0.00019375	0.000101087
490	0.5254238	0.0002125	0.000111653
495	0.533762	0.00022266	0.000118847
500	0.5414013	0.0002375	0.000128583
505	0.5498393	0.00027656	0.000152064
510	0.5491419	0.0003125	0.000171607
515	0.5571635	0.00034279	0.00019099
520	0.5608466	0.000375	0.000210317
525	0.5704874	0.00041875	0.000238892
530	0.577027	0.0004625	0.000266875
535	0.5771276	0.00050703	0.000292621
540	0.5831202	0.00055	0.000320716
545	0.5824175	0.00058359	0.000339893
550	0.5820544	0.000625	0.000363784
555	0.5899532	0.0007	0.000412967
560	0.5844749	0.000775	0.000452968
565	0.5852017	0.00085	0.000497421
570	0.5879782	0.000925	0.00054388
575	0.5847826	0.0014525	0.000849397
580	0.5889503	0.00198	0.001166122
585	0.59	0.0047175	0.002783325
590	0.5813705	0.0078	0.00453469
595	0.5823045	0.0114	0.006638271
600	0.5880039	0.015	0.008820059
605	0.5927734	0.026263	0.015568008
610	0.5933735	0.052	0.030855422
615	0.5810811	0.088388	0.051360596
620	0.5820895	0.175	0.101865663
625	0.5948827	0.43288	0.257512823
630	0.5925926	0.6138	0.363733338
635	0.5881773	0.67756	0.398525411
640	0.5873786	0.7448	0.437479581
645	0.5813282	0.82458	0.479351607
650	0.5855769	0.8897	0.520987768
655	0.5934449	0.89654	0.532050766
660	0.5952868	0.9034	0.537782095
665	0.5747922	0.91051	0.523354046
670	0.5504587	0.9172	0.50488072
675	0.5603961	0.92241	0.516914967
680	0.5703422	0.9276	0.529049425
685	0.5789474	0.93254	0.539891608
690	0.5731167	0.9379	0.537526153
695	0.5714286	0.9448	0.539885741
700	0.5606242	0.9517	0.533546051
705	0.5441177	0.9586	0.521591227
710	0.5532382	0.9655	0.534151482
715	0.5683298	0.97304	0.553007629
720	0.5684556	0.9793	0.556688569
725	0.5680272	0.9802	0.556780261
730	0.5521688	0.9828	0.542671497

735	0.5362853	0.98838	0.530053665
740	0.5141752	0.9931	0.510627391
745	0.5322165	0.99719	0.530720972
750	0.5544174	1	0.5544174
755	0.5542929	1	0.5542929
760	0.548995	1	0.548995
765	0.5325	1	0.5325
770	0.5100251	1	0.5100251
775	0.5064934	0.99814	0.505551322
780	0.504065	0.9966	0.502351179
785	0.5231885	0.99543	0.520797529
790	0.5372908	0.9945	0.534335701
795	0.5348101	0.9938	0.531494277
800	0.5333333	0.9931	0.5296533
805	0.509182	0.9862	0.502155288
810	0.4957842	0.9793	0.485521467
815	0.4736842	0.97283	0.4608142
820	0.483871	0.9655	0.467177451
825	0.4873189	0.95515	0.465462647
830	0.4990758	0.9448	0.471526816
835	0.5145068	0.93402	0.480559641
840	0.5129741	0.9241	0.474039366
845	0.5062241	0.9172	0.464308745
850	0.4782609	0.9103	0.435360897
855	0.4578587	0.86334	0.39528773
860	0.4407583	0.8	0.35260664
865	0.4127764	0.72848	0.300699352
870	0.4249364	0.6552	0.278418329
875	0.4453334	0.58016	0.258364625
880	0.4668508	0.5034	0.235012693
885	0.4770115	0.42523	0.2028396
890	0.4741642	0.3448	0.163491816
895	0.4600639	0.25704	0.118254825
900	0.4387755	0.175	0.076785713
905	0.4244604	0.11009	0.046728845
910	0.4076923	0.0621	0.025317692
915	0.407563	0.043125	0.017576154
920	0.4133333	0.0276	0.011407999
925	0.4444445	0.015525	0.006900001
930	0.4444444	0.0069	0.003066666
935	0.4603175	0	0
940	0.4777777	0	0
945	0.4647059	0	0
950	0.4716981	0	0
<b>SUM:</b>		25.84268888	
<b>T<sub>nvg</sub>(SUM/NVG):</b>		0.530666813	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon, (TEXSTARS) @ 34 deg DESIGN EYE

**Manufactured:** N/A

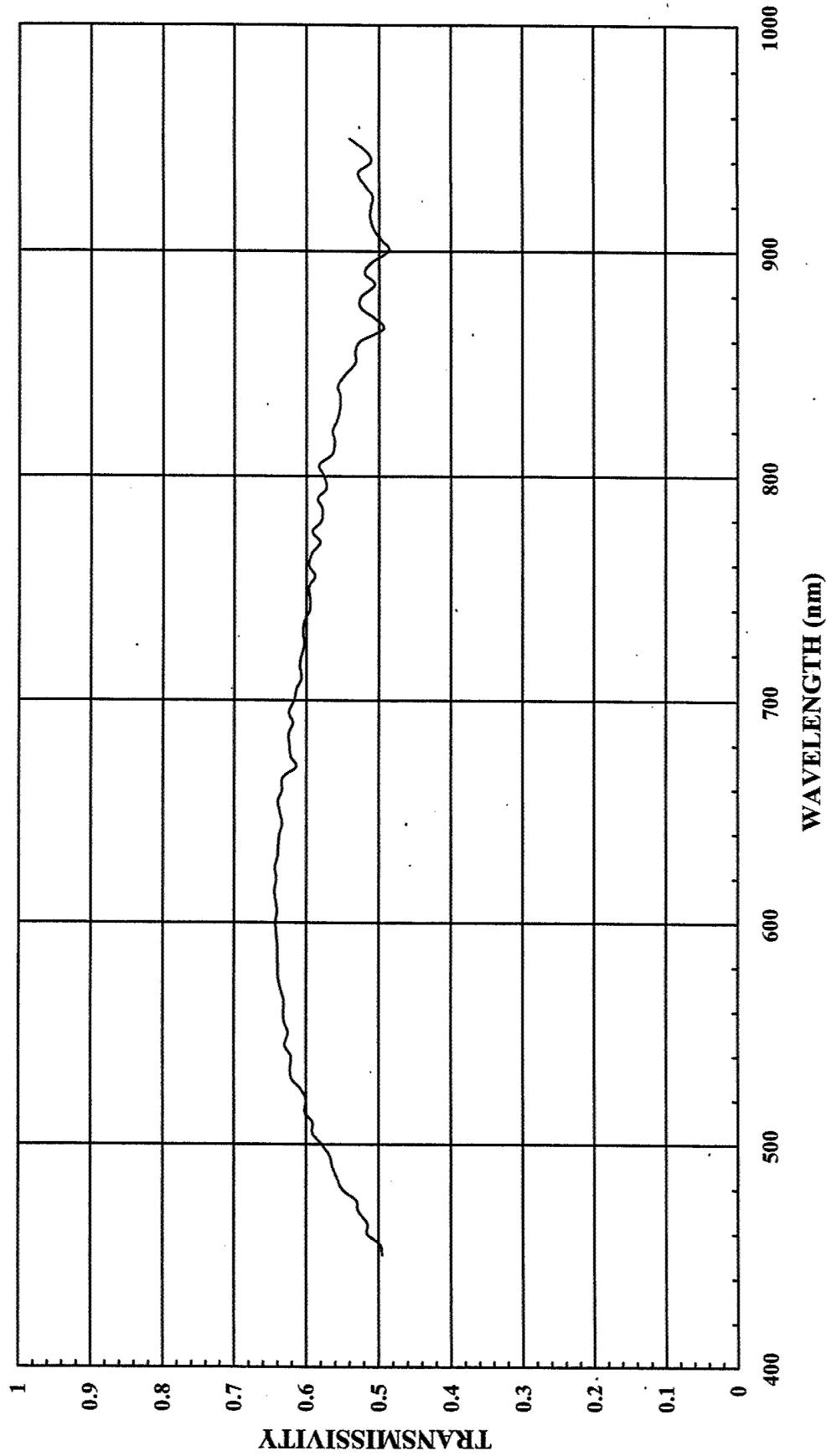
**S/N#** N/A

**Material Type:** N/A

**Construction:** N/A

**Coating:** Gold

COUPON (TEXSTARS, GOLD COAT, NO SERIAL NUMBER)  
④ 34 DEG DESIGN EYE  
 $T_{avg} = 59\%$



COUPON, TEXSTARS, GOLD COAT, NO S/N#, @ 34 DEG DESIGN EYE			
WAVELENGTH(nm)	SPECTRA- RADIOMETRIC READING	RELATIVE SPECTRAL SENSITIVITY "INVIS A"	NVG SPECTRAL RESPONSE
450	0.4950495	0.0001	4.9505E-05
455	0.4977376	0.0001125	5.59955E-05
460	0.5158563	0.000123	6.34503E-05
465	0.5154004	0.0001375	7.08676E-05
470	0.5283401	0.00015	7.9251E-05
475	0.5307692	0.00016172	8.5836E-05
480	0.5497186	0.000175	9.62008E-05
485	0.557971	0.00019375	0.000108107
490	0.5644068	0.0002125	0.000119936
495	0.5675241	0.00022266	0.000126365
500	0.5796178	0.0002375	0.000137659
505	0.5916399	0.00027656	0.000163624
510	0.5912636	0.0003125	0.00018477
515	0.602026	0.00034279	0.000206368
520	0.6005291	0.000375	0.000225198
525	0.6073781	0.00041875	0.00025434
530	0.6202703	0.0004625	0.000286875
535	0.6223404	0.00050703	0.000315545
540	0.6214834	0.00055	0.000341816
545	0.6300366	0.00058359	0.000367683
550	0.6257379	0.000625	0.000391086
555	0.6308411	0.0007	0.000441589
560	0.6324201	0.000775	0.000490126
565	0.6311659	0.00085	0.000536491
570	0.6360656	0.000925	0.000588361
575	0.6391304	0.0014525	0.000928337
580	0.639779	0.00198	0.001266762
585	0.64	0.0047175	0.0030192
590	0.6402569	0.0078	0.004994004
595	0.6419753	0.0114	0.007318518
600	0.6430678	0.015	0.009646017
605	0.640625	0.026263	0.016824734
610	0.6425703	0.052	0.033413656
615	0.6444907	0.088388	0.056965244
620	0.641791	0.175	0.112313425
625	0.6439232	0.43288	0.278741475
630	0.6399177	0.6138	0.392781484
635	0.6394088	0.67756	0.433237827
640	0.6378641	0.7448	0.475081182
645	0.6342637	0.82458	0.523001162
650	0.6375	0.8897	0.56718375
655	0.6396917	0.89654	0.573509197
660	0.6342213	0.9034	0.572955522
665	0.632964	0.91051	0.576320052
670	0.6146789	0.9172	0.563783487
675	0.6217822	0.92241	0.573538119
680	0.6235741	0.9276	0.578427335
685	0.6247877	0.93254	0.582639522
690	0.6189069	0.9379	0.580472782
695	0.6243386	0.9448	0.589875109
700	0.6170468	0.9517	0.58724344
705	0.6142534	0.9586	0.588823309
710	0.6070252	0.9655	0.586082831
715	0.6095445	0.97304	0.59311118
720	0.6067908	0.9793	0.59423023
725	0.6031746	0.9802	0.591231743
730	0.6049238	0.9828	0.594519111

735	0.602706	0.98838	0.595702556
740	0.5953608	0.9931	0.59125281
745	0.5953608	0.99719	0.593687836
750	0.5966709	1	0.5966709
755	0.5883839	1	0.5883839
760	0.5967337	1	0.5967337
765	0.5925	1	0.5925
770	0.5814536	1	0.5814536
775	0.5922078	0.99814	0.591106293
780	0.5799458	0.9966	0.577973984
785	0.5782609	0.99543	0.575618248
790	0.5844749	0.9945	0.581260288
795	0.5727848	0.9938	0.569233534
800	0.5766666	0.9931	0.5726876
805	0.5826377	0.9862	0.5745973
810	0.5649241	0.9793	0.553230171
815	0.5614035	0.97283	0.546150167
820	0.5645162	0.9655	0.545040391
825	0.557971	0.95515	0.532946001
830	0.5545287	0.9448	0.523918716
835	0.5531915	0.93402	0.516691925
840	0.5568862	0.9241	0.514618537
845	0.5477179	0.9172	0.502366858
850	0.5326087	0.9103	0.4848337
855	0.5330296	0.86334	0.460185775
860	0.5260664	0.8	0.42085312
865	0.4938575	0.72848	0.359765312
870	0.5063613	0.6552	0.331767924
875	0.5253334	0.58016	0.304777425
880	0.5248619	0.5034	0.26421548
885	0.5057471	0.42523	0.215058839
890	0.5197569	0.3448	0.179212179
895	0.5111821	0.25704	0.131394247
900	0.4863946	0.175	0.085119055
905	0.4964029	0.11009	0.054648995
910	0.5076923	0.0621	0.031527692
915	0.512605	0.043125	0.022106091
920	0.5111111	0.0276	0.014106666
925	0.5092593	0.015525	0.007906251
930	0.520202	0.0069	0.003589394
935	0.5291005	0	0
940	0.5111111	0	0
945	0.5176471	0	0
950	0.5408805	0	0
<b>SUM:</b>		28.63416025	
<b>T<sub>nvg</sub>(SUM/NVG):</b>		0.587988295	(SPECTRAL
			TRANSMISSION
			COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - TEXSTARS

**Manufactured:** N/A

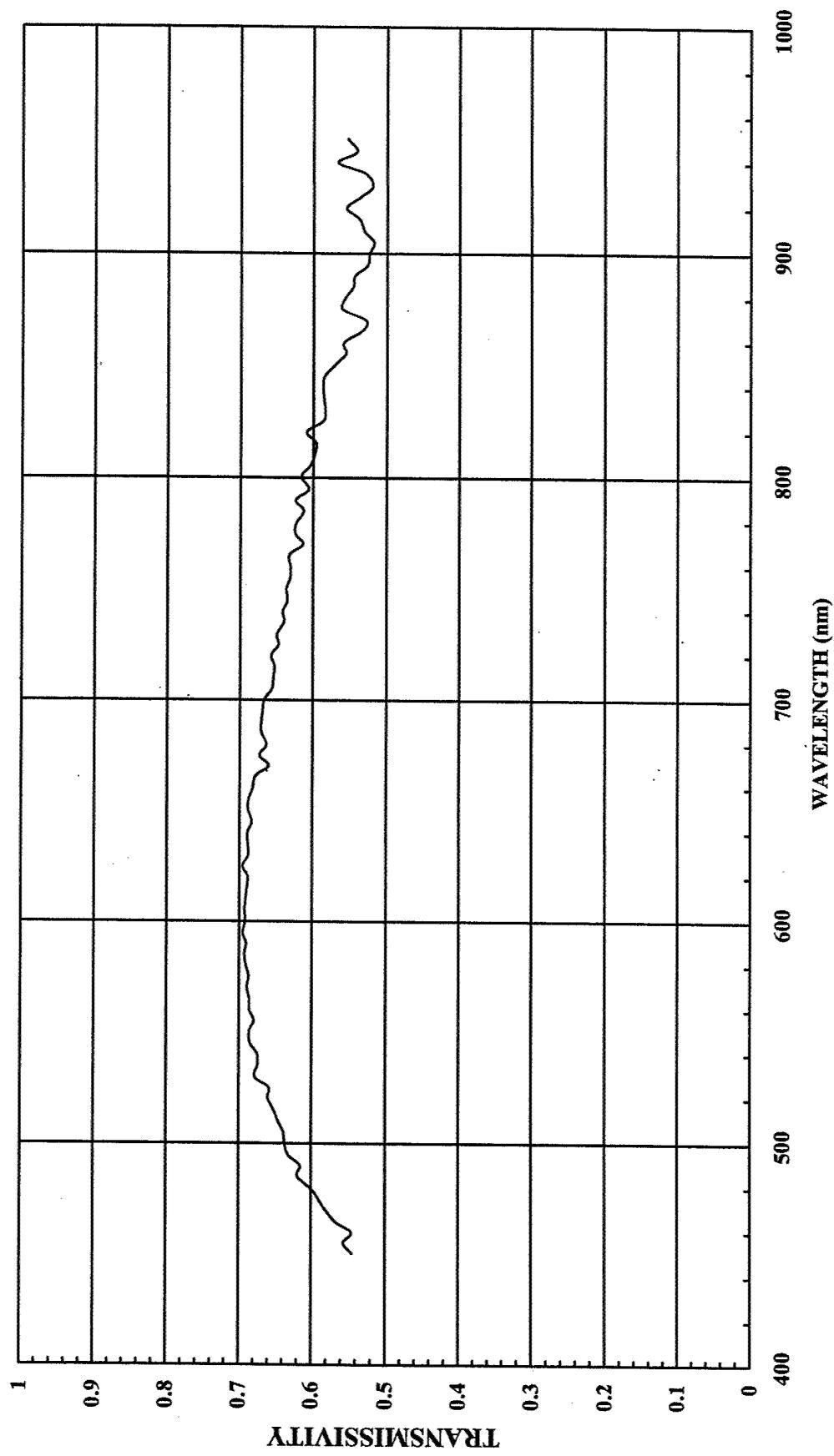
**S/N#** N/A

**Material Type:** N/A

**Construction:** N/A

**Coating:** Gold

COUPON (TEXSTARS, GOLD, NO SERIAL NUMBER) @ NORMAL  
T<sub>ng</sub> = 63%



COUPON, TEXSTAR GOLD, NO S/N#, @ NORMAL			
	SPECTRA- RADIOMETRIC READING	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
WAVELENGTH(nm)			
450	0.5445545	0.0001	5.44555E-05
455	0.5565611	0.0001125	6.26131E-05
460	0.5454546	0.000123	6.70909E-05
465	0.5667351	0.0001375	7.79261E-05
470	0.5809717	0.00015	8.71458E-05
475	0.5903847	0.00016172	9.5477E-05
480	0.6003752	0.000175	0.000105066
485	0.6195652	0.00019375	0.000120041
490	0.6152542	0.0002125	0.000130742
495	0.6318328	0.00022266	0.000140684
500	0.6369426	0.0002375	0.000151274
505	0.6382637	0.00027656	0.000176518
510	0.6458658	0.0003125	0.000201833
515	0.6512301	0.00034279	0.000223235
520	0.6600529	0.000375	0.00024752
525	0.6587615	0.00041875	0.000275856
530	0.6783784	0.0004625	0.00031375
535	0.6742021	0.00050703	0.000341841
540	0.6751918	0.00055	0.000371355
545	0.6849817	0.00058359	0.000399748
550	0.6859505	0.000625	0.000428719
555	0.6799065	0.0007	0.000475935
560	0.6860731	0.000775	0.000531707
565	0.6860986	0.00085	0.000583184
570	0.6896175	0.000925	0.000637896
575	0.6869565	0.0014525	0.000997804
580	0.6906077	0.00198	0.001367403
585	0.6933334	0.0047175	0.0032708
590	0.6905782	0.0078	0.00538651
595	0.6954733	0.0114	0.007928396
600	0.692232	0.015	0.01038348
605	0.6933593	0.026263	0.018209695
610	0.6917671	0.052	0.035971889
615	0.6902287	0.088388	0.061007934
620	0.6886994	0.175	0.120522395
625	0.696162	0.43288	0.301354607
630	0.6882716	0.6138	0.422461108
635	0.6886699	0.67756	0.466615177
640	0.6893203	0.7448	0.513405759
645	0.6833494	0.82458	0.563476248
650	0.6884615	0.8897	0.612524197
655	0.6878613	0.89654	0.61669517
660	0.6823771	0.9034	0.616459472
665	0.6786703	0.91051	0.617936095
670	0.6605505	0.9172	0.605856919
675	0.6732673	0.92241	0.62102849
680	0.6634981	0.9276	0.615460838
685	0.6706282	0.93254	0.625387622
690	0.6706056	0.9379	0.628960992
695	0.6693122	0.9448	0.632366167
700	0.6662665	0.9517	0.634085828
705	0.6561086	0.9586	0.628945704
710	0.6542261	0.9655	0.6316553
715	0.6529285	0.97304	0.635325548
720	0.6571741	0.9793	0.643570596

725	0.6473923	0.9802	0.634573932
730	0.6494725	0.9828	0.638301573
735	0.6396064	0.98838	0.632174174
740	0.6417526	0.9931	0.637324507
745	0.6353093	0.99719	0.633524081
750	0.6363636	1	0.6363636
755	0.6313131	1	0.6313131
760	0.6306533	1	0.6306533
765	0.6325	1	0.6325
770	0.6140351	1	0.6140351
775	0.6246753	0.99814	0.623513404
780	0.6233062	0.9966	0.621186959
785	0.6130435	0.99543	0.610241891
790	0.6240487	0.9945	0.620616432
795	0.6060126	0.9938	0.602255322
800	0.6166666	0.9931	0.6124116
805	0.6043406	0.9862	0.5960007
810	0.5986509	0.9793	0.586258826
815	0.5964912	0.97283	0.580284534
820	0.609319	0.9655	0.588297495
825	0.5869566	0.95515	0.560631596
830	0.5841035	0.9448	0.551860987
835	0.5860735	0.93402	0.54740437
840	0.5868264	0.9241	0.542286276
845	0.5850623	0.9172	0.536619142
850	0.5695652	0.9103	0.518475202
855	0.5558087	0.86334	0.479851883
860	0.5592417	0.8	0.44739336
865	0.5331695	0.72848	0.388403317
870	0.5292621	0.6552	0.346772528
875	0.56	0.58016	0.3248896
880	0.5580111	0.5034	0.280902788
885	0.545977	0.42523	0.2321658
890	0.5440729	0.3448	0.187596336
895	0.5271565	0.25704	0.135500307
900	0.5238095	0.175	0.091666663
905	0.5179856	0.11009	0.057025035
910	0.5307692	0.0621	0.032960767
915	0.5378151	0.043125	0.023193276
920	0.5555555	0.0276	0.015333332
925	0.537037	0.015525	0.008337499
930	0.520202	0.0069	0.003589394
935	0.5291005	0	0
940	0.5666666	0	0
945	0.5411764	0	0
950	0.5534591	0	0
<b>SUM:</b>		30.57960974	
<b>T<sub>NVG</sub>(SUM/NVG):</b>		0.627937136	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - SIERRACIN

**Manufactured:** N/A

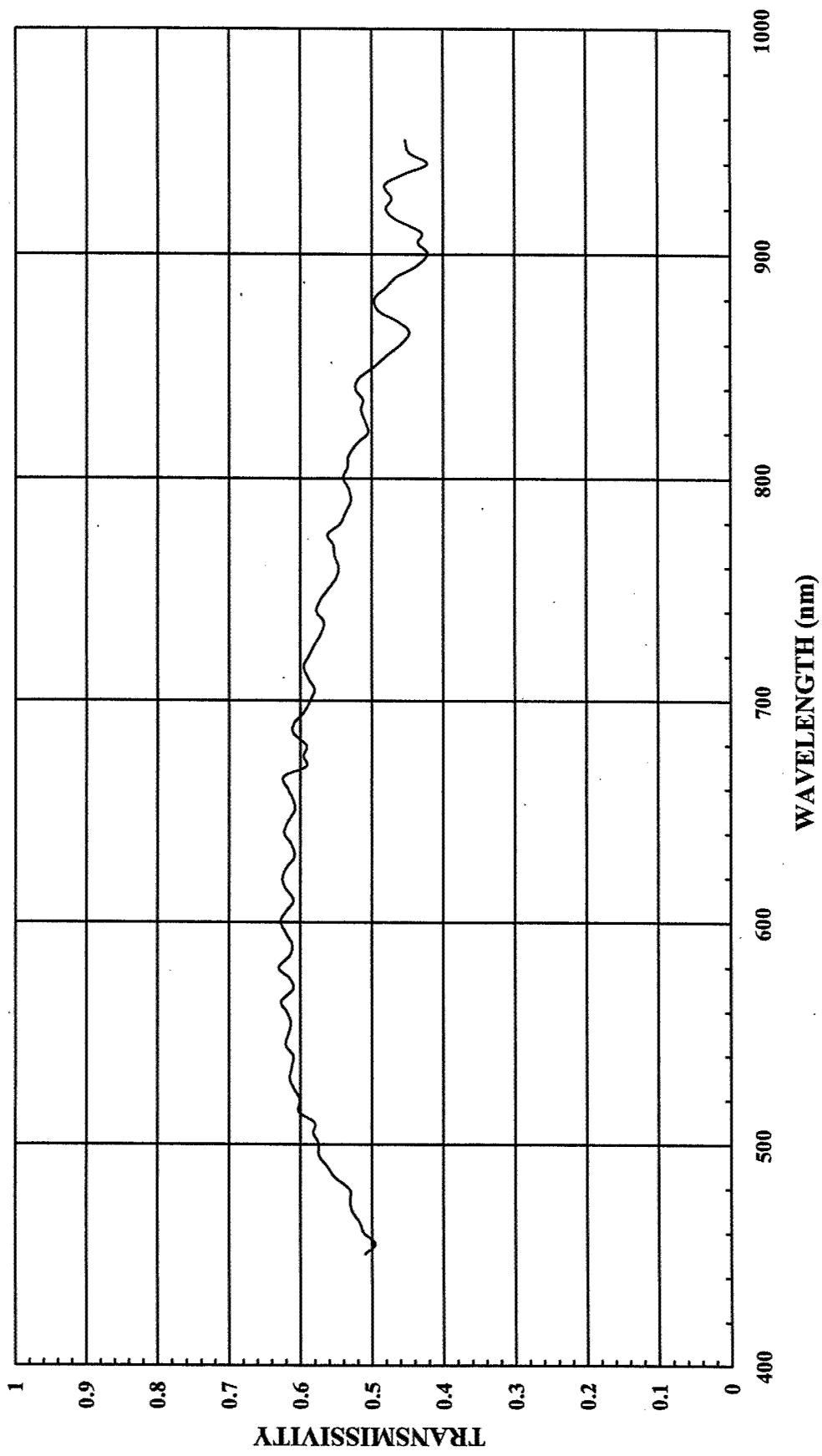
**S/N#** N/A

**Material Type:** N/A

**Construction:** N/A

**Coating:** Gold

COUPON (SIERRACIN, GOLD, NO SERIAL NUMBER) @ NORMAL  
 $T_{avg} = 55\%$



**COUPON, SIERRACIN, GOLD, NO S/N#, @ NORMAL**

WAVELENGTH(nm)	SPECTRA- RADIOMETRIC	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
	READING		
450	0.509901	0.0001	5.09901E-05
455	0.4954751	0.0001125	5.57409E-05
460	0.5116279	0.000123	6.29302E-05
465	0.5174538	0.0001375	7.11499E-05
470	0.5283401	0.00015	7.9251E-05
475	0.5307692	0.00016172	8.5836E-05
480	0.5309569	0.000175	9.29175E-05
485	0.5525362	0.00019375	0.000107054
490	0.5627118	0.0002125	0.000119576
495	0.573955	0.00022266	0.000127797
500	0.5748407	0.0002375	0.000136525
505	0.5819936	0.00027656	0.000160956
510	0.5803432	0.0003125	0.000181357
515	0.602026	0.00034279	0.000206368
520	0.6005291	0.000375	0.000225198
525	0.6086956	0.00041875	0.000254891
530	0.6148648	0.0004625	0.000284375
535	0.6117021	0.00050703	0.000310151
540	0.6099744	0.00055	0.000335486
545	0.6202686	0.00058359	0.000361983
550	0.6162928	0.000625	0.000385183
555	0.6133177	0.0007	0.000429322
560	0.6187215	0.000775	0.000479509
565	0.6266816	0.00085	0.000532679
570	0.6098361	0.000925	0.000564098
575	0.6152174	0.0014525	0.000893603
580	0.6298342	0.00198	0.001247072
585	0.6144444	0.0047175	0.002898641
590	0.611349	0.0078	0.004768522
595	0.6193416	0.0114	0.007060494
600	0.6273353	0.015	0.00941003
605	0.6191406	0.026263	0.01626049
610	0.6094378	0.052	0.031690766
615	0.6210526	0.088388	0.054893597
620	0.6247334	0.175	0.109328345
625	0.6183369	0.43288	0.267665677
630	0.6080247	0.6138	0.373205561
635	0.6128079	0.67756	0.415214121
640	0.6223301	0.7448	0.463511458
645	0.6179018	0.82458	0.509509466
650	0.6076923	0.8897	0.540663839
655	0.6098266	0.89654	0.54673394
660	0.6168033	0.9034	0.557220101
665	0.6232687	0.91051	0.567492384
670	0.5917431	0.9172	0.542746771
675	0.5960396	0.92241	0.549792887
680	0.5912548	0.9276	0.548447952
685	0.6095076	0.93254	0.568390217
690	0.6085672	0.9379	0.570775177
695	0.5952381	0.9448	0.562380957
700	0.5858343	0.9517	0.557538503
705	0.5803168	0.9586	0.556291684
710	0.5883644	0.9655	0.568065828
715	0.5954447	0.97304	0.579391511
720	0.5881708	0.9793	0.575995664
725	0.5804989	0.9802	0.569005022
730	0.5720985	0.9828	0.562258406

735	0.5670357	0.98838	0.560446745
740	0.5773196	0.9931	0.573336095
745	0.5734536	0.99719	0.571842195
750	0.5608194	1	0.5608194
755	0.550505	1	0.550505
760	0.5464824	1	0.5464824
765	0.5525	1	0.5525
770	0.5538847	1	0.5538847
775	0.5623376	0.99814	0.561291652
780	0.5447154	0.9966	0.542863368
785	0.5362319	0.99543	0.53378132
790	0.5296804	0.9945	0.526767158
795	0.5316456	0.9938	0.528349397
800	0.54	0.9931	0.536274
805	0.5342237	0.9862	0.526851413
810	0.5328837	0.9793	0.521853007
815	0.5210526	0.97283	0.506895601
820	0.5053764	0.9655	0.487940914
825	0.509058	0.95515	0.486226749
830	0.5150375	0.9448	0.48660743
835	0.5125725	0.93402	0.478752966
840	0.5229541	0.9241	0.483261884
845	0.5186722	0.9172	0.475726142
850	0.4956522	0.9103	0.451192198
855	0.4783599	0.86334	0.412987236
860	0.4597156	0.8	0.36777248
865	0.4471744	0.72848	0.325757607
870	0.4631043	0.6552	0.303425937
875	0.4906667	0.58016	0.284665193
880	0.4958678	0.5034	0.249619851
885	0.479885	0.42523	0.204061499
890	0.4650456	0.3448	0.160347723
895	0.4376997	0.25704	0.112506331
900	0.4217687	0.175	0.073809523
905	0.4352518	0.11009	0.047916871
910	0.4307692	0.0621	0.026750767
915	0.4663866	0.043125	0.020112922
920	0.48	0.0276	0.013248
925	0.4722222	0.015525	0.00733125
930	0.4822335	0.0069	0.003327411
935	0.4550265	0	0
940	0.4222222	0	0
945	0.4470588	0	0
950	0.4528302	0	0
<b>SUM:</b>		27.01454235	
<b>Tnvg(SUM/NVG):</b>		0.554730243	(SPECTRAL TRANSMISSION COEFFICIENT)

# **COUPON**

**Aircraft:** N/A

**Part Name:** Coupon - SIERRACIN

**Manufactured:** N/A

**S/N#** N/A

**Material Type:** Gold wire mesh

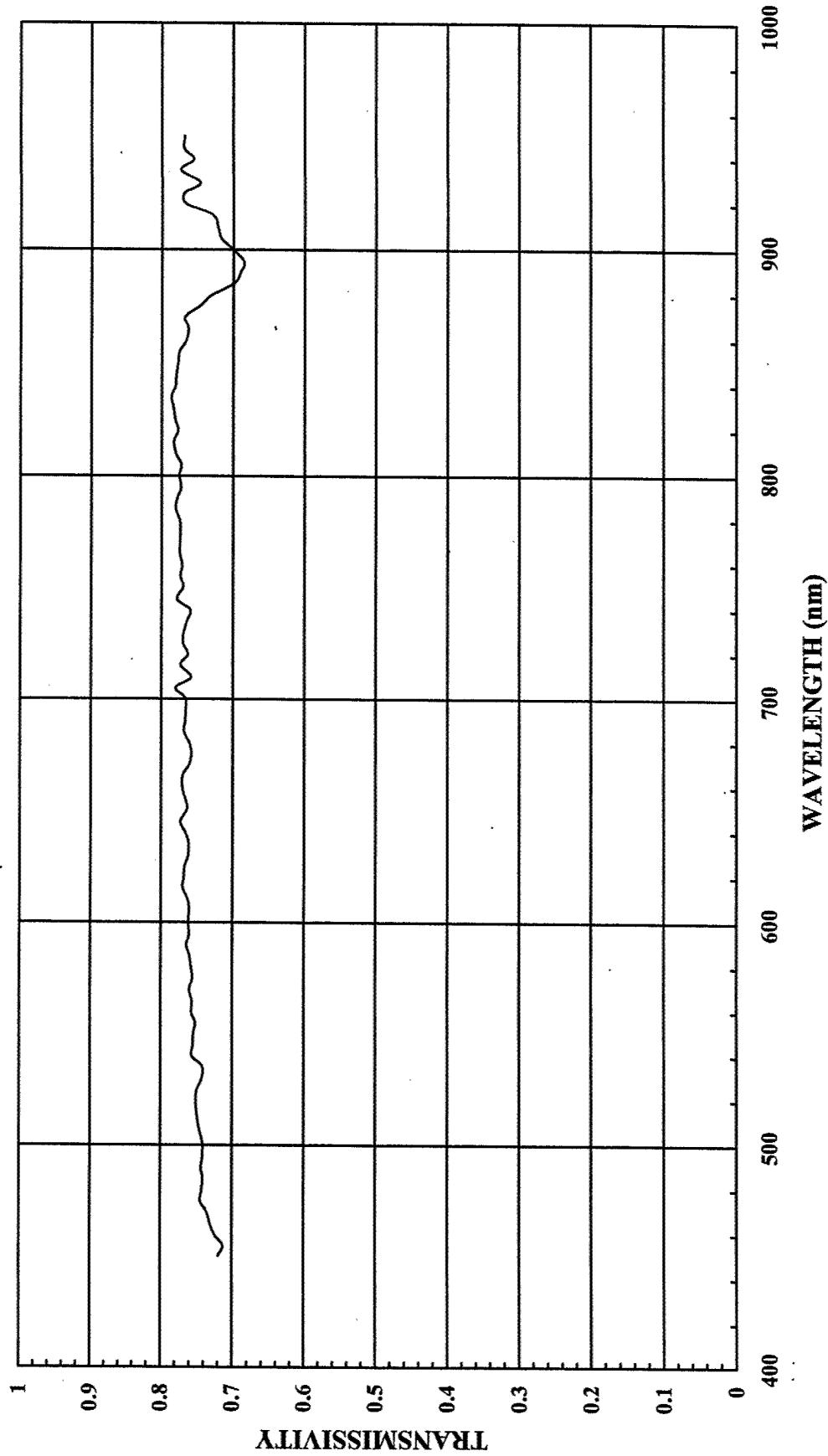
**Construction:** N/A

**Coating:** N/A

**COUPON (SIERRACIN, GOLD WIRE MESH, NO SERIAL NUMBER)**

**@ NORMAL**

**T<sub>avg</sub> = 77%**



COUPON, SIERRACIN, GOLD WIRE MESH, NO S/N#, @ NORMAL			
WAVELENGTH(nm)	SPECTRA- RADIOMETRIC READING	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
450	0.7190476	0.0001	7.19048E-05
455	0.7123893	0.0001125	8.01438E-05
460	0.7234927	0.000123	8.89896E-05
465	0.7298387	0.0001375	0.000100353
470	0.7351779	0.00015	0.000110277
475	0.7442748	0.00016172	0.000120364
480	0.7425926	0.000175	0.000129954
485	0.740942	0.00019375	0.000143558
490	0.7436762	0.0002125	0.000158031
495	0.741214	0.00022266	0.000165039
500	0.7410297	0.0002375	0.000175995
505	0.7444444	0.00027656	0.000205884
510	0.7476489	0.0003125	0.00023364
515	0.75	0.00034279	0.000257093
520	0.7506703	0.000375	0.000281501
525	0.7493506	0.00041875	0.000313791
530	0.7427441	0.0004625	0.000343519
535	0.7416777	0.00050703	0.000376053
540	0.7564433	0.00055	0.000416044
545	0.7549019	0.00058359	0.000440553
550	0.7541177	0.000625	0.000471324
555	0.7517483	0.0007	0.000526224
560	0.7571922	0.000775	0.000586824
565	0.7561797	0.00085	0.000642753
570	0.760221	0.000925	0.000703204
575	0.7557003	0.0014525	0.001097655
580	0.7576755	0.00198	0.001500197
585	0.76	0.0047175	0.0035853
590	0.7643866	0.0078	0.005962215
595	0.7607106	0.0114	0.008672101
600	0.7618577	0.015	0.011427866
605	0.7607004	0.026263	0.019978275
610	0.7624254	0.052	0.039646121
615	0.7698745	0.088388	0.068047667
620	0.7684098	0.175	0.134471715
625	0.767094	0.43288	0.332059651
630	0.7622014	0.6138	0.467839219
635	0.7617148	0.67756	0.51610748
640	0.7663097	0.7448	0.570747465
645	0.7732558	0.82458	0.637611268
650	0.7639155	0.8897	0.67965562
655	0.7665706	0.89654	0.687261206
660	0.7705761	0.9034	0.696138449
665	0.770195	0.91051	0.701270249
670	0.7614679	0.9172	0.698418358
675	0.75803	0.92241	0.699214452
680	0.7602459	0.9276	0.705204097
685	0.7682709	0.93254	0.716443345
690	0.7669753	0.9379	0.719346134
695	0.7659864	0.9448	0.723703951
700	0.7665036	0.9517	0.729481476
705	0.7800926	0.9586	0.747796766
710	0.7585825	0.9655	0.732411404
715	0.7735229	0.97304	0.752668723
720	0.7631579	0.9793	0.747360531
725	0.7697517	0.9802	0.754510616
730	0.7695907	0.9828	0.75635374

735	0.7643468	0.98838	0:75546509
740	0.7596899	0.9931	0.75444804
745	0.7783573	0.99719	0.776170116
750	0.7696267	1	0.7696267
755	0.7739464	1	0.7739464
760	0.7713568	1	0.7713568
765	0.7748428	1	0.7748428
770	0.7745592	1	0.7745592
775	0.773779	0.99814	0.772339771
780	0.7746288	0.9966	0.771995062
785	0.7804878	0.99543	0.776920971
790	0.7784431	0.9945	0.774161663
795	0.7732284	0.9938	0.768434384
800	0.7755775	0.9931	0.770226015
805	0.7728026	0.9862	0.762137924
810	0.7800338	0.9793	0.7638871
815	0.7830687	0.97283	0.761792723
820	0.7771837	0.9655	0.750370862
825	0.7811935	0.95515	0.746156972
830	0.7833333	0.9448	0.740093302
835	0.7865385	0.93402	0.73464269
840	0.7808765	0.9241	0.721607974
845	0.7796257	0.9172	0.715072692
850	0.7770563	0.9103	0.70735435
855	0.7755102	0.86334	0.669528976
860	0.7663552	0.8	0.61308416
865	0.7630923	0.72848	0.555897479
870	0.7680413	0.6552	0.50322066
875	0.7473685	0.58016	0.433593309
880	0.7309783	0.5034	0.367974476
885	0.6988636	0.42523	0.297177769
890	0.6902654	0.3448	0.23800351
895	0.6853583	0.25704	0.176164497
900	0.7016949	0.175	0.122796608
905	0.7168459	0.11009	0.078917565
910	0.7213741	0.0621	0.044797332
915	0.728745	0.043125	0.031427128
920	0.7662337	0.0276	0.02114805
925	0.7695852	0.015525	0.01194781
930	0.7463415	0.0069	0.005149756
935	0.7736843	0	0
940	0.7553191	0	0
945	0.7692307	0	0
950	0.7682927	0	0
<b>SUM:</b>		37.43157501	
<b>Tnvg(SUM/NVG):</b>		0.768638848	(SPECTRAL TRANSMISSION COEFFICIENT)

# **SAMPLE**

**Aircraft:** F-111

**Part Name:** Sample

**Manufactured:** N/A

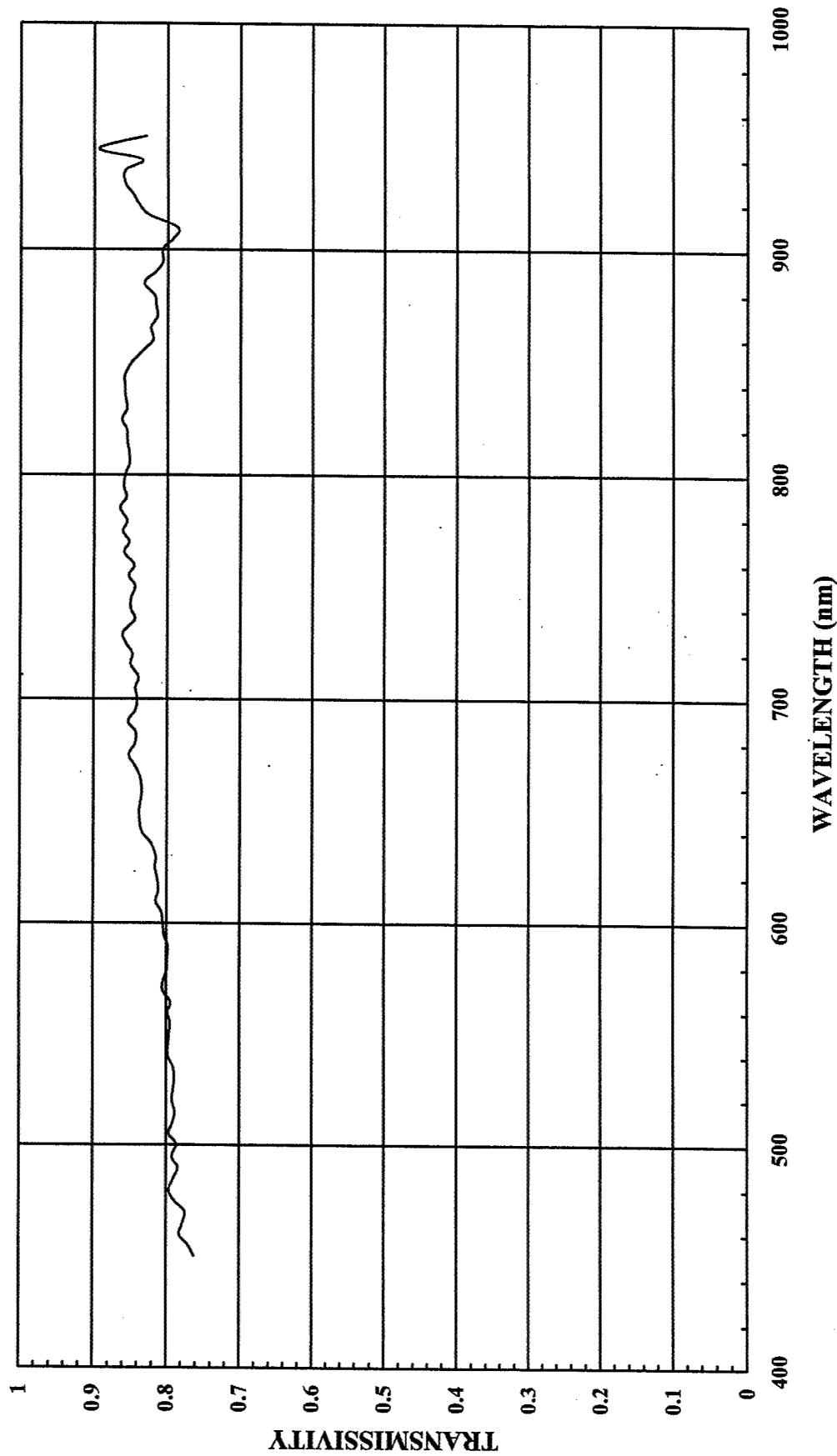
**S/N#** N/A

**Material Type:** N/A

**Construction:** N/A

**Coating:** Non-coated

SAMPLE (F-111, NON-COATED, NO SERIAL NUMBER) @ NORMAL  
 $T_{avg} = 85\%$



<b>SAMPLE, F-111, NON-COATED, NO S/N# @ NORMAL</b>			
<b>WAVELENGTH(nm)</b>	<b>SPECTRA- RADIOMETRIC</b>	<b>RELATIVE SPECTRAL SENSITIVITY</b>	<b>NVG SPECTRAL RESPONSE</b>
	<b>READING</b>	<b>"NVIS A"</b>	
450	0.7619047	0.0001	7.61905E-05
455	0.7699115	0.0001125	8.6615E-05
460	0.7817048	0.000123	9.61497E-05
465	0.7782258	0.0001375	0.000107006
470	0.7747036	0.00015	0.000116206
475	0.788168	0.00016172	0.000127463
480	0.7962963	0.000175	0.000139352
485	0.7898551	0.00019375	0.000153034
490	0.7841484	0.0002125	0.000166632
495	0.7923322	0.0002266	0.000176421
500	0.7862715	0.0002375	0.000186739
505	0.7968253	0.00027656	0.00022037
510	0.791536	0.0003125	0.000247355
515	0.7882353	0.00034279	0.000270199
520	0.7922252	0.000375	0.000297084
525	0.7909091	0.00041875	0.000331193
530	0.7889183	0.0004625	0.000364875
535	0.7909454	0.00050703	0.000401033
540	0.7976804	0.00055	0.000438724
545	0.7977941	0.00058359	0.000465585
550	0.7964706	0.000625	0.000497794
555	0.7948719	0.0007	0.00055641
560	0.7986192	0.000775	0.00061893
565	0.794382	0.00085	0.000675225
570	0.8055249	0.000925	0.000745111
575	0.8034745	0.0014525	0.001167047
580	0.7993421	0.00198	0.001582697
585	0.7988889	0.0047175	0.003768758
590	0.7980456	0.0078	0.006224756
595	0.8035528	0.0114	0.009160502
600	0.805336	0.015	0.01208004
605	0.807393	0.026263	0.021204562
610	0.8151093	0.052	0.042385684
615	0.8115345	0.088388	0.071729911
620	0.8132337	0.175	0.142315898
625	0.8162394	0.43288	0.353333711
630	0.815161	0.6138	0.500345822
635	0.8215354	0.67756	0.556639526
640	0.8334956	0.7448	0.620787523
645	0.8372093	0.82458	0.690346045
650	0.8378119	0.8897	0.745401247
655	0.8357348	0.89654	0.749269678
660	0.8343621	0.9034	0.753762721
665	0.8370473	0.91051	0.762139937
670	0.8440367	0.9172	0.774150461
675	0.8522484	0.92241	0.786122447
680	0.8442623	0.9276	0.783137709
685	0.8431373	0.93254	0.786259258
690	0.853395	0.9379	0.800399171
695	0.8435374	0.9448	0.796974136
700	0.8410758	0.9517	0.800451839
705	0.84375	0.9586	0.80881875
710	0.8394241	0.9655	0.810463969
715	0.8501094	0.97304	0.827190451
720	0.8475877	0.9793	0.830042635
725	0.8566591	0.9802	0.83969725
730	0.8608187	0.9828	0.846012618
735	0.8449329	0.98838	0.83511478
740	0.8501292	0.9931	0.844263309
745	0.8500652	0.99719	0.847676517

750	0.8442729	1	0.8442729
755	0.853129	1	0.853129
760	0.8454773	1	0.8454773
765	0.8591195	1	0.8591195
770	0.8526449	1	0.8526449
775	0.8611826	0.99814	0.8595808
780	0.8556005	0.9966	0.852691458
785	0.8651364	0.99543	0.861182727
790	0.8562874	0.9945	0.851577819
795	0.8598425	0.9938	0.854511477
800	0.8580858	0.9931	0.852165008
805	0.8524047	0.9862	0.840641515
810	0.8527919	0.9793	0.835139108
815	0.8553791	0.97283	0.83213845
820	0.855615	0.9655	0.826096283
825	0.8625678	0.95515	0.823881634
830	0.8555555	0.9448	0.808328836
835	0.8576923	0.93402	0.801101762
840	0.8585657	0.9241	0.793400563
845	0.8586278	0.9172	0.787533418
850	0.8484849	0.9103	0.772375804
855	0.8344671	0.86334	0.720428826
860	0.8200935	0.8	0.6560748
865	0.8229427	0.72848	0.599497298
870	0.814433	0.6552	0.533616502
875	0.8157895	0.58016	0.473288436
880	0.8179348	0.5034	0.411748378
885	0.8323863	0.42523	0.353955626
890	0.8171091	0.3448	0.281739218
895	0.8068537	0.25704	0.207393675
900	0.8067797	0.175	0.141186448
905	0.7921147	0.11009	0.087203907
910	0.7862596	0.0621	0.048826721
915	0.825911	0.043125	0.035617412
920	0.8398268	0.0276	0.02317922
925	0.8479262	0.015525	0.013164054
930	0.8585366	0.0069	0.005923903
935	0.8578948	0	0
940	0.8351064	0	0
945	0.8934911	0	0
950	0.8292683	0	0
<b>SUM:</b>		41.16781774	
<b>T<sub>nvG</sub>(SUM/NVG):</b>		0.845360742	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **SAMPLE**

**Aircraft:** N/A

**Part Name:** Sample

**Manufactured:** N/A

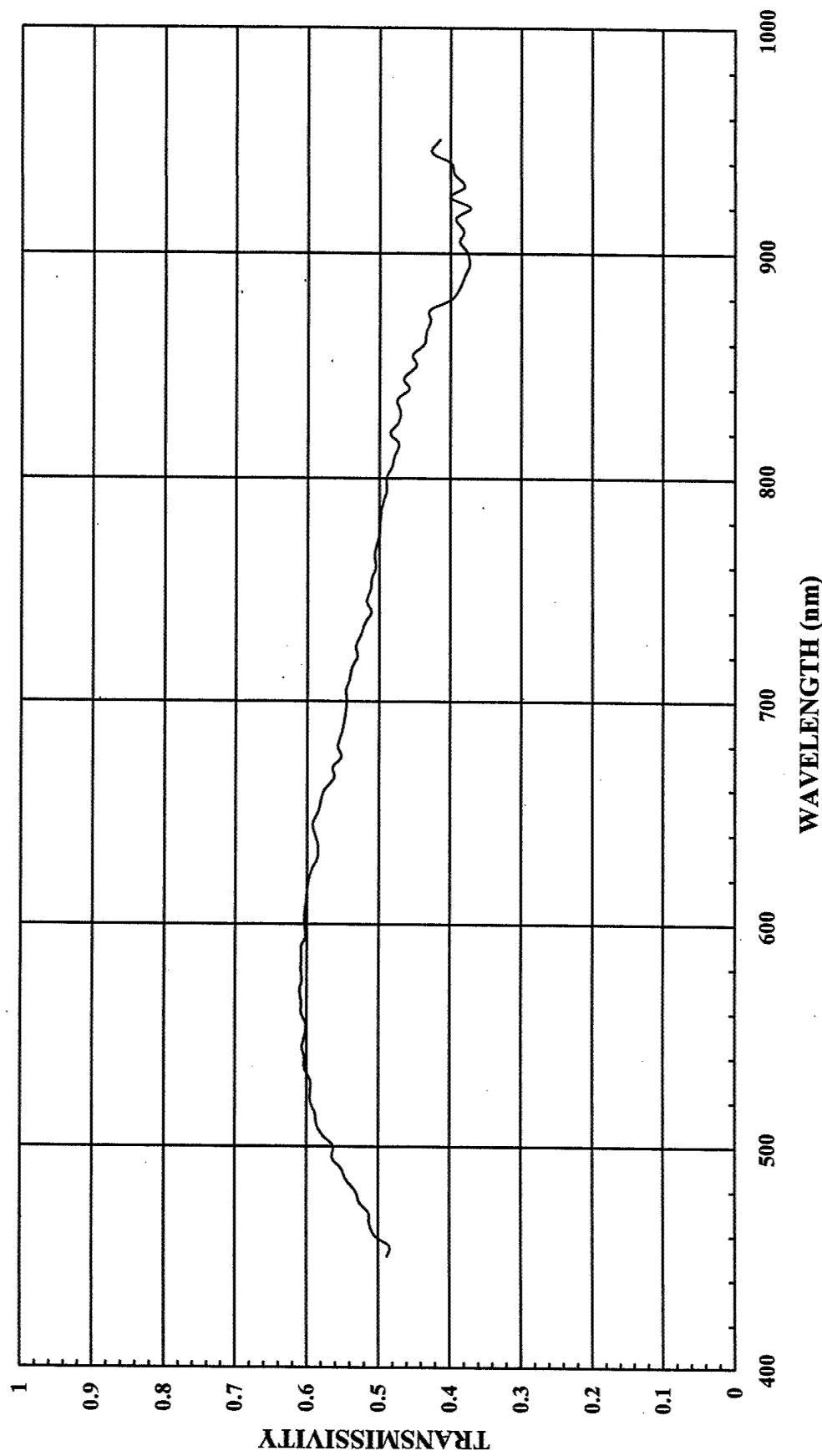
**S/N#** N/A

**Material Type:** Acrylic, Laminated

**Construction:** N/A

**Coating:** Gold

SAMPLE (GOLD, ACRYLIC, LAMINATED) @ NORMAL  
 $T_{avg} = 51\%$



SAMPLE, ACRYLIC, GOLD, LAMINATED, NO S/N# @ NORMAL			
WAVELENGTH(nm)	SPECTRA- RADIOMETRIC READING	RELATIVE SPECTRAL SENSITIVITY "NVIS A"	NVG SPECTRAL RESPONSE
450	0.4880952	0.0001	4.88095E-05
455	0.4845133	0.0001125	5.45077E-05
460	0.5051975	0.000123	6.21393E-05
465	0.5131313	0.0001375	7.05556E-05
470	0.513834	0.00015	7.70751E-05
475	0.5267175	0.00016172	8.51808E-05
480	0.5314815	0.000175	9.30093E-05
485	0.5452899	0.00019375	0.00010565
490	0.5514334	0.0002125	0.00011718
495	0.5638977	0.00022266	0.000125557
500	0.5631825	0.0002375	0.000133756
505	0.5777777	0.00027656	0.00015979
510	0.5862069	0.0003125	0.00018319
515	0.5882353	0.00034279	0.000201641
520	0.5951743	0.000375	0.00022319
525	0.5948052	0.00041875	0.000249075
530	0.5949869	0.0004625	0.000275181
535	0.6031957	0.00050703	0.000305838
540	0.6030928	0.00055	0.000331701
545	0.6066176	0.00058359	0.000354016
550	0.6023529	0.000625	0.000376471
555	0.6013986	0.0007	0.000420979
560	0.6075949	0.000775	0.000470886
565	0.6078651	0.00085	0.000516685
570	0.6099448	0.000925	0.000564199
575	0.606949	0.0014525	0.000881593
580	0.6085527	0.00198	0.001204934
585	0.6077778	0.0047175	0.002867192
590	0.6080348	0.0078	0.004742671
595	0.6018808	0.0114	0.006861441
600	0.6037549	0.015	0.009056324
605	0.6031128	0.026263	0.015839551
610	0.6013917	0.052	0.031272368
615	0.6004119	0.088388	0.053069207
620	0.597652	0.175	0.1045891
625	0.5929487	0.43288	0.256675633
630	0.5856698	0.6138	0.359484123
635	0.5852442	0.67756	0.39653806
640	0.5890945	0.7448	0.438757584
645	0.5920542	0.82458	0.488196052
650	0.584453	0.8897	0.519987834
655	0.5811719	0.89654	0.521043855
660	0.5761317	0.9034	0.520477378
665	0.562674	0.91051	0.512320304
670	0.5642202	0.9172	0.517502767
675	0.5524625	0.92241	0.509596935
680	0.557377	0.9276	0.517022905

685	0.5525846	0.93254	0.515307243
690	0.5493827	0.9379	0.515266034
695	0.5469388	0.9448	0.516747778
700	0.5452322	0.9517	0.518897485
705	0.5462963	0.9586	0.523679633
710	0.5415282	0.9655	0.522845477
715	0.5382932	0.97304	0.523780815
720	0.5307017	0.9793	0.519716175
725	0.5327314	0.9802	0.522183318
730	0.5263158	0.9828	0.517263168
735	0.5201465	0.98838	0.514102398
740	0.5116279	0.9931	0.508097667
745	0.5176011	0.99719	0.516146641
750	0.5122265	1	0.5122265
755	0.5108557	1	0.5108557
760	0.5050251	1	0.5050251
765	0.5069183	1	0.5069183
770	0.5037784	1	0.5037784
775	0.5	0.99814	0.49907
780	0.4993252	0.9966	0.497627494
785	0.497848	0.99543	0.495572835
790	0.494012	0.9945	0.491294934
795	0.4897638	0.9938	0.486727264
800	0.490099	0.9931	0.486717317
805	0.482587	0.9862	0.475927299
810	0.4788494	0.9793	0.468937217
815	0.4726631	0.97283	0.459820844
820	0.4848485	0.9655	0.468121227
825	0.4737794	0.95515	0.452530394
830	0.4703704	0.9448	0.444405954
835	0.475	0.93402	0.4436595
840	0.4581673	0.9241	0.423392402
845	0.4656965	0.9172	0.42713683
850	0.448052	0.9103	0.407861736
855	0.4535148	0.86334	0.391537467
860	0.4369159	0.8	0.34953272
865	0.4339152	0.72848	0.316098545
870	0.427835	0.6552	0.280317492
875	0.4289474	0.58016	0.248858124
880	0.3994565	0.5034	0.201086402
885	0.3863636	0.42523	0.164293394
890	0.380531	0.3448	0.131207089
895	0.3738318	0.25704	0.096089726
900	0.3762712	0.175	0.06584746
905	0.3870968	0.11009	0.042615487
910	0.3816794	0.0621	0.023702291
915	0.3927126	0.043125	0.016935731
920	0.3722944	0.0276	0.010275325
925	0.4009217	0.015525	0.006224309
930	0.3804878	0.0069	0.002625366
935	0.3947369	0	0
940	0.3989362	0	0
945	0.4260355	0	0
950	0.4146341	0	0
<b>SUM:</b>		24.84248208	
<b>T<sub>Nvg</sub>(SUM/NVG):</b>		0.510128062	(SPECTRAL TRANSMISSION COEFFICIENT)

# **SAMPLE**

**Aircraft:** N/A

**Part Name:** Sample, ACT3, 3mm, Mono

**Manufactured:** N/A

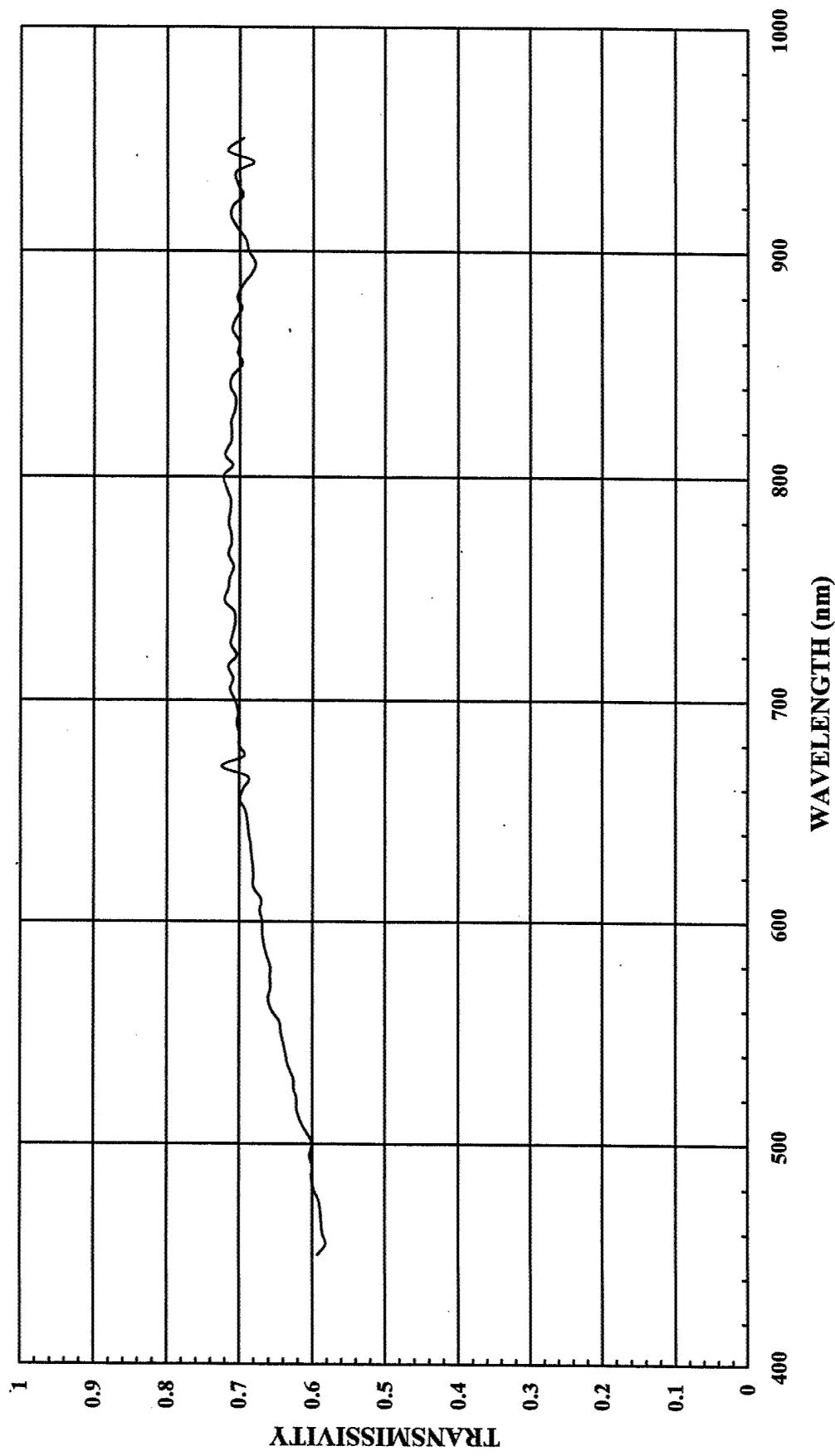
**S/N#** N/A

**Material Type:** N/A

**Construction:** N/A

**Coating:** N/A

SAMPLE (ACT3, 3mm, MONO, NO SERIAL NUMBER) @ NORMAL  
 $T_{avg} = 71\%$



**SAMPLE, ACT3, 3mm, MONO, NO S/N# @ NORMAL**

WAVELENGTH(nm)	SPECTRA-	RELATIVE	NVG
	RADIOMETRIC	SPECTRAL SENSITIVITY	
READING	"NVIS A"	RESPONSE	
450	0.5928571	0.0001	5.92857E-05
455	0.5818584	0.0001125	6.54591E-05
460	0.5862786	0.000123	7.21123E-05
465	0.5878788	0.0001375	8.08333E-05
470	0.5889329	0.00015	8.83399E-05
475	0.591603	0.00016172	9.5674E-05
480	0.5981482	0.000175	0.000104676
485	0.6014493	0.00019375	0.000116531
490	0.6003372	0.0002125	0.000127572
495	0.6038339	0.00022266	0.00013445
500	0.600624	0.0002375	0.000142648
505	0.6079365	0.00027656	0.000168131
510	0.6159874	0.0003125	0.000192496
515	0.622093	0.00034279	0.000213247
520	0.6219839	0.000375	0.000233244
525	0.625974	0.00041875	0.000262127
530	0.6266491	0.0004625	0.000289825
535	0.6338215	0.00050703	0.000321367
540	0.6365979	0.00055	0.000350129
545	0.6397059	0.00058359	0.000373326
550	0.6435294	0.000625	0.000402206
555	0.6456877	0.0007	0.000451981
560	0.6559263	0.000775	0.000508343
565	0.6606943	0.00085	0.00056159
570	0.6574585	0.000925	0.000608149
575	0.6579804	0.0014525	0.000955717
580	0.6578948	0.00198	0.001302632
585	0.6633333	0.0047175	0.003129275
590	0.6666667	0.0078	0.0052
595	0.6687565	0.0114	0.007623824
600	0.6689724	0.015	0.010034586
605	0.672179	0.026263	0.017653437
610	0.6699802	0.052	0.03483897
615	0.6809624	0.088388	0.060188905
620	0.6808965	0.175	0.119156888
625	0.681624	0.43288	0.295061397
630	0.6832814	0.6138	0.419398123
635	0.6849452	0.67756	0.46409147
640	0.6874391	0.7448	0.512004642
645	0.6889535	0.82458	0.568097277
650	0.6919386	0.8897	0.615617772
655	0.6993276	0.89654	0.626975167
660	0.6954733	0.9034	0.628290579
665	0.6880223	0.91051	0.626451184
670	0.7247707	0.9172	0.664759686
675	0.6937901	0.92241	0.639958926
680	0.7008197	0.9276	0.650080354
685	0.7005348	0.93254	0.653276722
690	0.7037037	0.9379	0.6600037
695	0.7020408	0.9448	0.663288148
700	0.7066014	0.9517	0.672472552
705	0.712963	0.9586	0.693446332
710	0.7087486	0.9655	0.684296773
715	0.7155361	0.97304	0.696245247
720	0.7039474	0.9793	0.689375689
725	0.7121896	0.9802	0.698088246

730	0.7099415	0.9828	0.697730506
735	0.7057387	0.98838	0.697538016
740	0.7080103	0.9931	0.703125029
745	0.7209909	0.99719	0.718964916
750	0.7155727	1	0.7155727
755	0.7139208	1	0.7139208
760	0.7085427	1	0.7085427
765	0.7157233	1	0.7157233
770	0.7115869	1	0.7115869
775	0.7120823	0.99814	0.710757827
780	0.7152496	0.9966	0.712817751
785	0.713056	0.99543	0.709797334
790	0.7125748	0.9945	0.708655639
795	0.7181103	0.9938	0.713658016
800	0.7227722	0.9931	0.717785072
805	0.7097844	0.9862	0.699989375
810	0.7208121	0.9793	0.70589129
815	0.712522	0.97283	0.693162777
820	0.71123	0.9655	0.686692565
825	0.7124774	0.95515	0.680522789
830	0.7074074	0.9448	0.668358512
835	0.7057692	0.93402	0.659202548
840	0.7131474	0.9241	0.659019512
845	0.7110187	0.9172	0.652146352
850	0.6969697	0.9103	0.634451518
855	0.7029479	0.86334	0.60688304
860	0.7009346	0.8	0.56074768
865	0.7107232	0.72848	0.517747637
870	0.7061856	0.6552	0.462692805
875	0.6973684	0.58016	0.404585251
880	0.7038043	0.5034	0.354295085
885	0.6960227	0.42523	0.295969733
890	0.6843657	0.3448	0.235969293
895	0.6791278	0.25704	0.17456301
900	0.6881356	0.175	0.12042373
905	0.6917562	0.11009	0.07615544
910	0.7022901	0.0621	0.043612215
915	0.7125506	0.043125	0.030728745
920	0.7099566	0.0276	0.019594802
925	0.6958525	0.015525	0.01080311
930	0.702439	0.0069	0.004846829
935	0.7052632	0	0
940	0.680851	0	0
945	0.7159763	0	0
950	0.6951219	0	0
<b>SUM:</b>	<b>34.39262011</b>		
<b>Tnvg(SUM/NVG):</b>	<b>0.706235415</b>	<b>(SPECTRAL</b>	
		<b>TRANSMISSION</b>	
		<b>COEFFICIENT)</b>	

# **SAMPLE**

**Aircraft:** N/A

**Part Name:** Sample, ACT3, 6mm, Mono

**Manufactured:** N/A

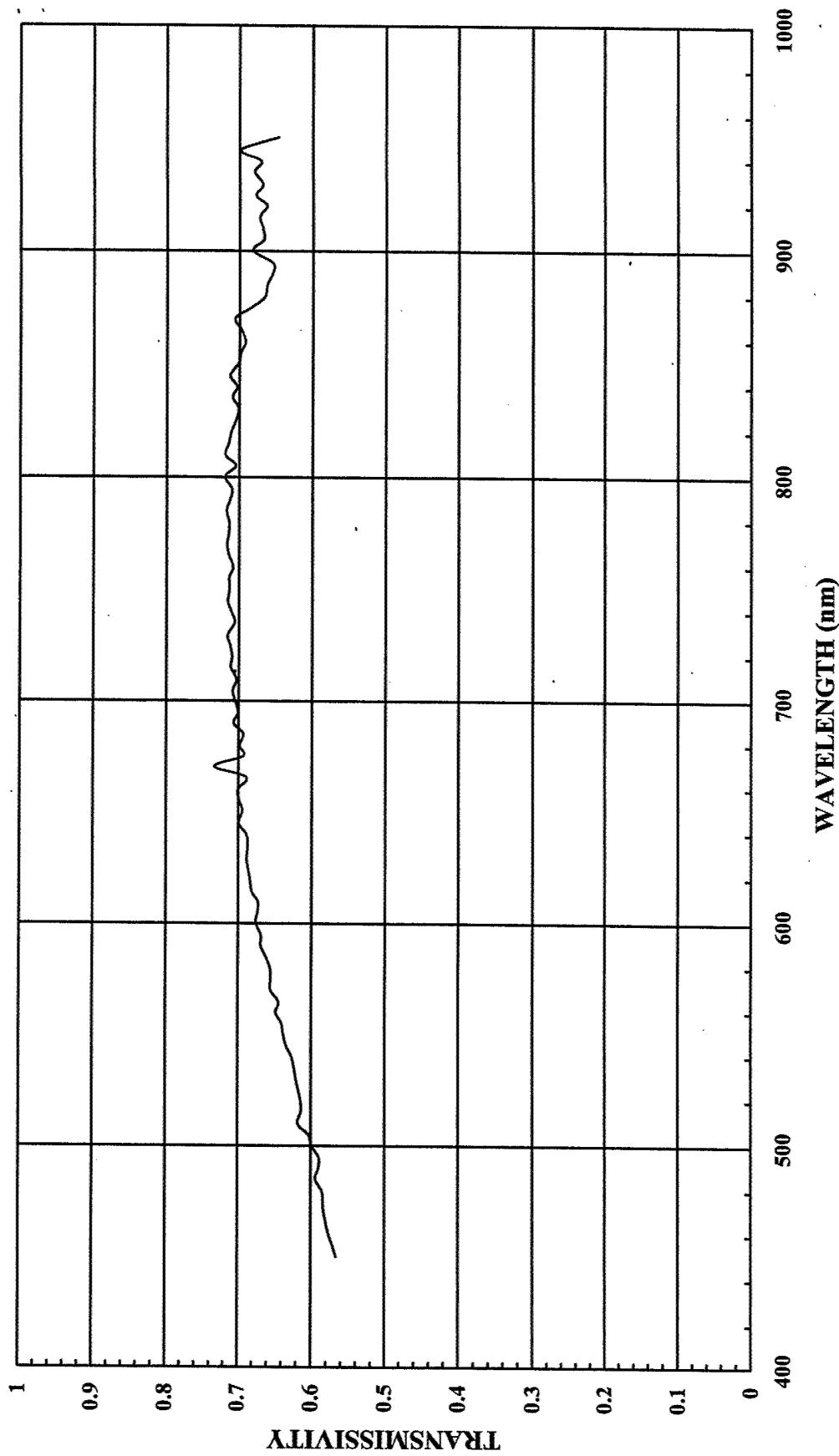
**S/N#** N/A

**Material Type:** N/A

**Construction:** N/A

**Coating:** N/A

SAMPLE (ACT3, MONO, 6mm, NO SERIAL NUMBER) @ NORMAL  
T<sub>avg</sub> = 70%



<b>SAMPLE, ACT3, 6mm, MONO, NO S/N# @ NORMAL</b>			
<b>WAVELENGTH(nm)</b>	<b>SPECTRA-</b>	<b>RELATIVE</b>	<b>NVG</b>
	<b>RADIOMETRIC</b>	<b>SPECTRAL SENSITIVITY</b>	<b>SPECTRAL</b>
	<b>READING</b>	<b>"NVIS A"</b>	<b>RESPONSE</b>
450	0.5666667	0.0001	5.66667E-05
455	0.5707964	0.0001125	6.42146E-05
460	0.5758836	0.000123	7.08337E-05
465	0.579798	0.0001375	7.97222E-05
470	0.5830039	0.00015	8.74506E-05
475	0.5839695	0.00016172	9.44395E-05
480	0.5851852	0.000175	0.000102407
485	0.5942029	0.00019375	0.000115127
490	0.5902192	0.0002125	0.000125422
495	0.5894569	0.00022266	0.000131248
500	0.599064	0.0002375	0.000142278
505	0.6031746	0.00027656	0.000166814
510	0.6175548	0.0003125	0.000192986
515	0.6133721	0.00034279	0.000210258
520	0.613941	0.000375	0.000230228
525	0.6168832	0.00041875	0.00025832
530	0.6200528	0.0004625	0.000286774
535	0.6231691	0.00050703	0.000315965
540	0.6262887	0.00055	0.000344459
545	0.6335784	0.00058359	0.00036975
550	0.6376471	0.000625	0.000398529
555	0.6398602	0.0007	0.000447902
560	0.6478711	0.000775	0.0005021
565	0.6438202	0.00085	0.000547247
570	0.6552486	0.000925	0.000606105
575	0.6547231	0.0014525	0.000950985
580	0.6557018	0.00198	0.00129829
585	0.6622222	0.0047175	0.003124033
590	0.6688383	0.0078	0.005216939
595	0.6687565	0.0114	0.007623824
600	0.6758894	0.015	0.010138341
605	0.6731517	0.026263	0.017678983
610	0.6729622	0.052	0.034994034
615	0.6817713	0.088388	0.060260402
620	0.6840981	0.175	0.119717168
625	0.6869659	0.43288	0.297373799
630	0.6884735	0.6138	0.422585034
635	0.6869392	0.67756	0.465442524
640	0.6893865	0.7448	0.513455065
645	0.6996124	0.82458	0.576886393
650	0.6948177	0.8897	0.618179308
655	0.6993276	0.89654	0.626975167
660	0.7006173	0.9034	0.632937669
665	0.689415	0.91051	0.627719252
670	0.733945	0.9172	0.673174354
675	0.6937901	0.92241	0.639958926
680	0.6987705	0.9276	0.648179516
685	0.6934046	0.93254	0.646627526
690	0.7067901	0.9379	0.662898435
695	0.7006803	0.9448	0.662002747
700	0.705379	0.9517	0.671309194
705	0.7083333	0.9586	0.679008301
710	0.7032115	0.9655	0.678950703
715	0.7111597	0.97304	0.691986834
720	0.7094298	0.9793	0.694744603

725	0.7121896	0.9802	0.698088246
730	0.7157894	0.9828	0.703477822
735	0.7057387	0.98838	0.697538016
740	0.7105943	0.9931	0.705691199
745	0.7157758	0.99719	0.71376447
750	0.7129987	1	0.7129987
755	0.7139208	1	0.7139208
760	0.7085427	1	0.7085427
765	0.7144654	1	0.7144654
770	0.7166247	1	0.7166247
775	0.714653	0.99814	0.713323745
780	0.7139001	0.9966	0.71147284
785	0.7173601	0.99543	0.714081764
790	0.7125748	0.9945	0.708655639
795	0.7102363	0.9938	0.705832835
800	0.7194719	0.9931	0.714507544
805	0.7048093	0.9862	0.695082932
810	0.7191201	0.9793	0.704234314
815	0.7142857	0.97283	0.694878558
820	0.71123	0.9655	0.686692565
825	0.7052441	0.95515	0.673613902
830	0.7012987	0.9448	0.662587012
835	0.7096154	0.93402	0.662794976
840	0.7031872	0.9241	0.649815292
845	0.7130977	0.9172	0.65405321
850	0.7012987	0.9103	0.638392207
855	0.6984127	0.86334	0.60296762
860	0.6915888	0.8	0.55327104
865	0.6982543	0.72848	0.508664292
870	0.7061856	0.6552	0.462692805
875	0.6842105	0.58016	0.396951564
880	0.6657609	0.5034	0.335144037
885	0.6619318	0.42523	0.281473259
890	0.6548672	0.3448	0.225798211
895	0.6542056	0.25704	0.168157007
900	0.681356	0.175	0.1192373
905	0.6666667	0.11009	0.073393337
910	0.6679389	0.0621	0.041479006
915	0.6720648	0.043125	0.028982795
920	0.6623377	0.0276	0.018280521
925	0.6774194	0.015525	0.010516936
930	0.6682927	0.0069	0.00461122
935	0.6789474	0	0
940	0.6702128	0	0
945	0.6982248	0	0
950	0.6463414	0	0
<b>SUM:</b>		34.30409793	
<b>T<sub>nv</sub>g(SUM/NVG):</b>		0.704417656	(SPECTRAL TRANSMISSION COEFFICIENT)

## **SAMPLE**

**Aircraft:** N/A

**Part Name:** Sample, ACT3, 10 mm, Mono

**Manufactured:** N/A

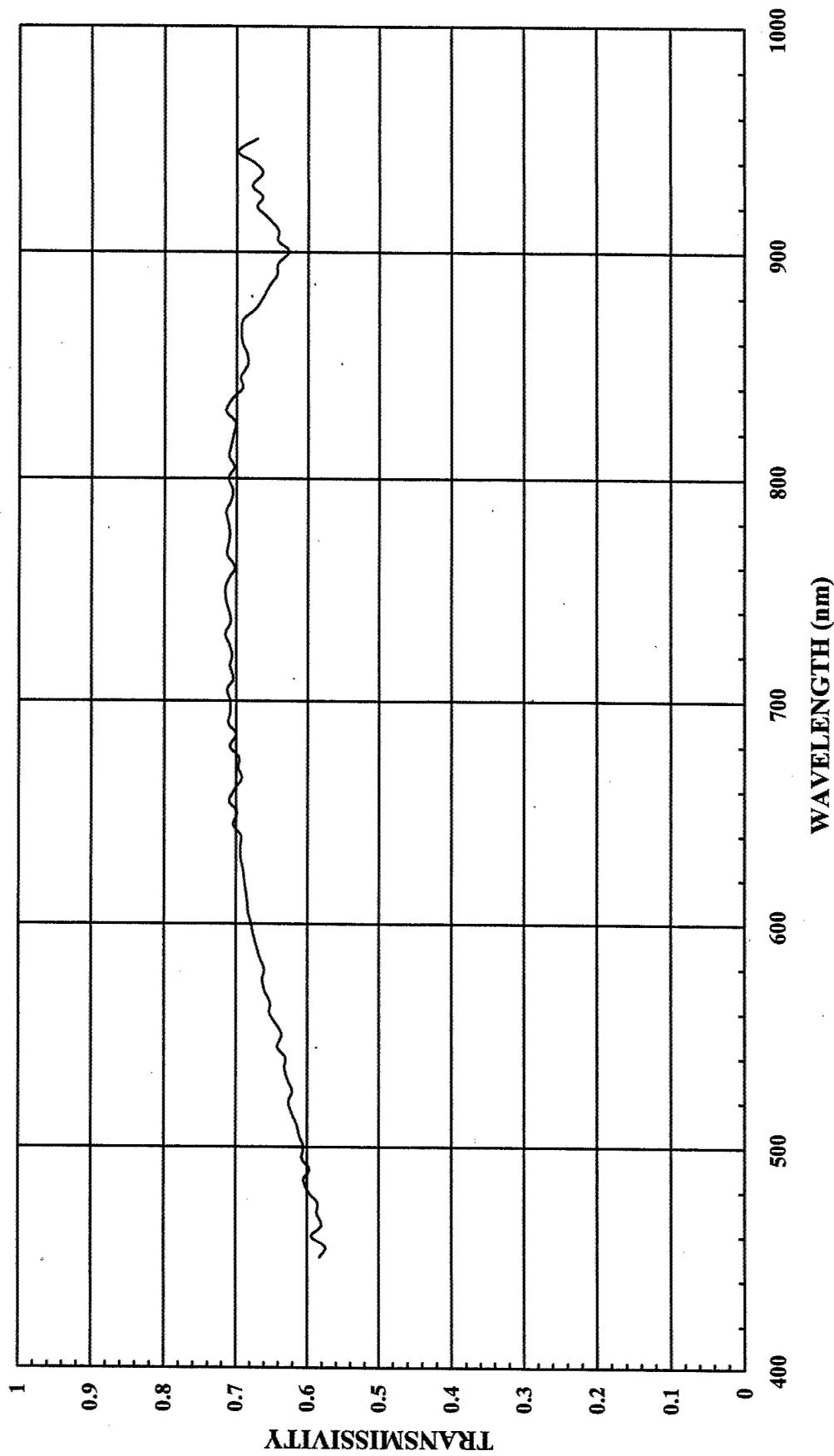
**S/N#** N/A

**Material Type:** N/A

**Construction:** N/A

**Coating:** N/A

SAMPLE (ACT3, MONO, 10mm, NO SERIAL NUMBER) @ NORMAL  
 $T_{nvg} = 70\%$



<b>SAMPLE, ACT3, 10 mm, MONO, NO S/N# @ NORMAL</b>			
<b>WAVELENGTH(nm)</b>	<b>SPECTRA- RADIOMETRIC</b>	<b>RELATIVE SPECTRAL SENSITIVITY</b>	<b>NVG SPECTRAL RESPONSE</b>
	<b>READING</b>	<b>"INVIS A"</b>	
450	0.5833334	0.0001	5.83333E-05
455	0.5752212	0.0001125	6.47124E-05
460	0.5945946	0.000123	7.31351E-05
465	0.5806452	0.0001375	7.98387E-05
470	0.5869566	0.00015	8.80435E-05
475	0.5858778	0.00016172	9.47482E-05
480	0.5981482	0.000175	0.000104676
485	0.6050724	0.00019375	0.000117233
490	0.5969646	0.0002125	0.000126855
495	0.6070288	0.00022266	0.000135161
500	0.6053042	0.0002375	0.00014376
505	0.611111	0.00027656	0.000169009
510	0.6144201	0.0003125	0.000192006
515	0.622093	0.00034279	0.000213247
520	0.6260054	0.000375	0.000234752
525	0.6207792	0.00041875	0.000259951
530	0.6266491	0.0004625	0.000289825
535	0.6311584	0.00050703	0.000320016
540	0.6301546	0.00055	0.000346585
545	0.6409314	0.00058359	0.000374041
550	0.6352941	0.000625	0.000397059
555	0.6433567	0.0007	0.00045035
560	0.6524741	0.000775	0.000505667
565	0.6516854	0.00085	0.000553933
570	0.6596685	0.000925	0.000610193
575	0.6623236	0.0014525	0.000962025
580	0.6600878	0.00198	0.001306974
585	0.6666666	0.0047175	0.003145
590	0.6710098	0.0078	0.005233876
595	0.6750261	0.0114	0.007695298
600	0.6788538	0.015	0.010182807
605	0.6828793	0.026263	0.017934459
610	0.6838966	0.052	0.035562623
615	0.6858908	0.088388	0.060624516
620	0.6883671	0.175	0.120464243
625	0.6901709	0.43288	0.298761179
630	0.6936656	0.6138	0.425771945
635	0.6939182	0.67756	0.470171216
640	0.6932814	0.7448	0.516355987
645	0.7044573	0.82458	0.5808814
650	0.6986564	0.8897	0.621594599
655	0.7098943	0.89654	0.636448636
660	0.7037037	0.9034	0.635725923
665	0.6922005	0.91051	0.630255477
670	0.6972477	0.9172	0.63951559
675	0.6959314	0.92241	0.641934083
680	0.7090164	0.9276	0.657683613
685	0.7005348	0.93254	0.653276722
690	0.7114198	0.9379	0.66724063
695	0.7088435	0.9448	0.669715339
700	0.7090464	0.9517	0.674799459
705	0.712963	0.9586	0.683446332
710	0.7043189	0.9655	0.680019898
715	0.7089715	0.97304	0.689857628
720	0.7061403	0.9793	0.691523196
725	0.7099323	0.9802	0.69587564
730	0.7157894	0.9828	0.703477822

735	0.7081807	0.98838	0.69995164
740	0.7105943	0.9931	0.705691199
745	0.7144719	0.99719	0.712464234
750	0.7155727	1	0.7155727
755	0.7100894	1	0.7100894
760	0.7022613	1	0.7022613
765	0.7132075	1	0.7132075
770	0.7115869	1	0.7115869
775	0.7095116	0.99814	0.708191908
780	0.7112011	0.9966	0.708783016
785	0.7144907	0.99543	0.711225478
790	0.7080838	0.9945	0.704189339
795	0.7055118	0.9938	0.701137627
800	0.7112211	0.9931	0.706313674
805	0.7031509	0.9862	0.693447418
810	0.7106599	0.9793	0.69594924
815	0.707231	0.97283	0.688015534
820	0.7040998	0.9655	0.679808357
825	0.7016275	0.95515	0.670159507
830	0.7148148	0.9448	0.675357023
835	0.7057692	0.93402	0.659202548
840	0.691235	0.9241	0.638770264
845	0.6943867	0.9172	0.636891481
850	0.6839827	0.9103	0.622629452
855	0.6848072	0.86334	0.591221448
860	0.6915888	0.8	0.55327104
865	0.6932669	0.72848	0.505031071
870	0.6907216	0.6552	0.452560792
875	0.6736842	0.58016	0.390844625
880	0.6630435	0.5034	0.333776098
885	0.6534091	0.42523	0.277849152
890	0.6430678	0.3448	0.221729777
895	0.6417446	0.25704	0.164954032
900	0.6271186	0.175	0.109745755
905	0.6415771	0.11009	0.070631223
910	0.6412214	0.0621	0.039819849
915	0.6558704	0.043125	0.028284411
920	0.6709957	0.0276	0.018519481
925	0.6635944	0.015525	0.010302303
930	0.6780488	0.0069	0.004678537
935	0.6631579	0	0
940	0.6755319	0	0
945	0.6982248	0	0
950	0.6707317	0	0
<b>SUM:</b>		34.1775636	
<b>T<sub>nv</sub>g(SUM/NVG):</b>		0.701819336	(SPECTRAL TRANSMISSION COEFFICIENT)

# **SAMPLE**

**Aircraft:** N/A

**Part Name:** Sample, 3mm

**Manufactured:** N/A

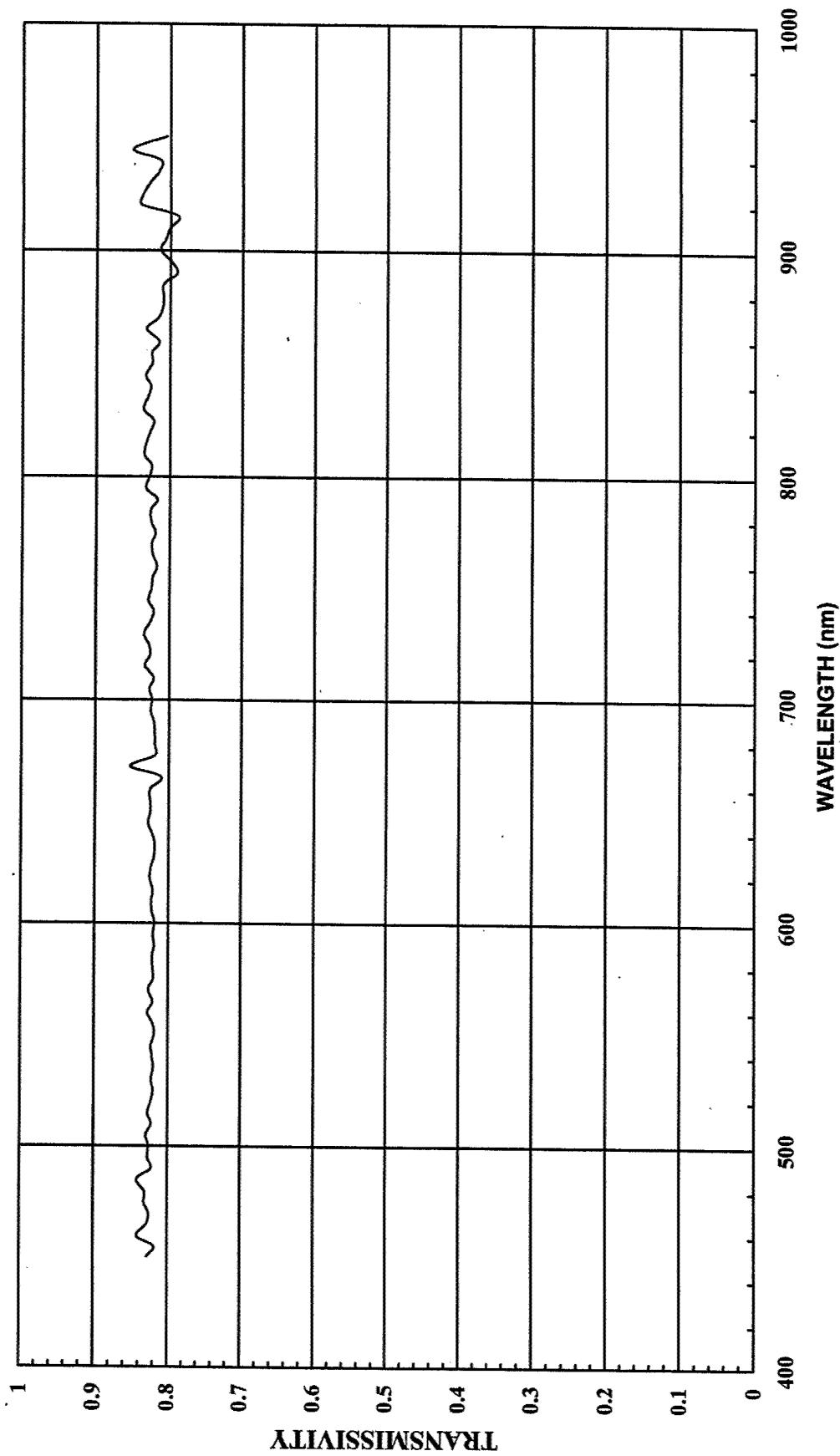
**S/N#** N/A

**Material Type:** Acrylic

**Construction:** N/A

**Coating:** N/A

SAMPLE (ACRYLIC, 3mm, NO SERIAL NUMBER) @ NORMAL  
 $T_{avg} = 82\%$



<u>SAMPLE, ACRYLIC, 3mm, NO S/N# @ NORMAL</u>			
<u>WAVELENGTH(nm)</u>	<u>SPECTRA- RADIOMETRIC READING</u>	<u>RELATIVE SPECTRAL SENSITIVITY "NVIS A"</u>	<u>NVG SPECTRAL RESPONSE</u>
450	0.8285714	0.0001	8.28571E-05
455	0.818584	0.0001125	9.20907E-05
460	0.8419958	0.000123	0.000103565
465	0.8282829	0.0001375	0.000113889
470	0.826087	0.00015	0.000123913
475	0.8320611	0.00016172	0.000134561
480	0.8314815	0.000175	0.000145509
485	0.8423913	0.00019375	0.000163213
490	0.8229342	0.0002125	0.000174874
495	0.8274761	0.00022266	0.000184246
500	0.8268331	0.0002375	0.000196373
505	0.8301587	0.00027656	0.000229589
510	0.822884	0.0003125	0.000257151
515	0.8279412	0.00034279	0.00028381
520	0.8230563	0.000375	0.000308646
525	0.8207793	0.00041875	0.000343701
530	0.8232191	0.0004625	0.000380739
535	0.8202397	0.00050703	0.000415886
540	0.8221649	0.00055	0.000452191
545	0.8235294	0.00058359	0.000480604
550	0.8188235	0.000625	0.000511765
555	0.8216783	0.0007	0.000575175
560	0.8285385	0.000775	0.000642117
565	0.8213482	0.00085	0.000698146
570	0.8276243	0.000925	0.000765552
575	0.8208469	0.0014525	0.00119228
580	0.821272	0.00198	0.001626119
585	0.8222222	0.0047175	0.003878833
590	0.8197612	0.0078	0.006394137
595	0.8213167	0.0114	0.00936301
600	0.8191699	0.015	0.012287549
605	0.8229572	0.026263	0.021613325
610	0.8240557	0.052	0.042850896
615	0.8218331	0.088388	0.072640184
620	0.8260406	0.175	0.144557105
625	0.8247864	0.43288	0.357033537
630	0.820353	0.6138	0.503532671
635	0.8195414	0.67756	0.555288471
640	0.8227848	0.7448	0.612810119
645	0.8284884	0.82458	0.683154965
650	0.8253359	0.8897	0.73430135
655	0.8261287	0.89654	0.740657425
660	0.8261316	0.9034	0.746327287
665	0.810585	0.91051	0.738045748
670	0.853211	0.9172	0.782565129
675	0.8201285	0.92241	0.75649473
680	0.8196722	0.9276	0.760327933
685	0.8199643	0.93254	0.764649508
690	0.8209876	0.9379	0.77000427
695	0.8258504	0.9448	0.780263458
700	0.8239608	0.9517	0.784163493
705	0.8275463	0.9586	0.793285883
710	0.8217054	0.9655	0.793356564
715	0.833698	0.97304	0.811221502
720	0.8267543	0.9793	0.809640486
725	0.8284424	0.9802	0.81203924
730	0.8350877	0.9828	0.820724192
735	0.8266178	0.98838	0.817012501
740	0.8217054	0.9931	0.816035633
745	0.8292047	0.99719	0.826874635

750	0.8249678	1	0.8249678
755	0.8237548	1	0.8237548
760	0.8178392	1	0.8178392
765	0.8238993	1	0.8238993
770	0.8249371	1	0.8249371
775	0.8200514	0.99814	0.818526104
780	0.8259109	0.9966	0.823102803
785	0.8263988	0.99543	0.822622157
790	0.8173653	0.9945	0.812869791
795	0.8330709	0.9938	0.82790586
800	0.8283828	0.9931	0.822666959
805	0.8258706	0.9862	0.814473586
810	0.8358714	0.9793	0.818568862
815	0.8324515	0.97283	0.809833793
820	0.8270945	0.9655	0.79855974
825	0.8227848	0.95515	0.785882902
830	0.837037	0.9448	0.790832558
835	0.8307692	0.93402	0.775955048
840	0.8266932	0.9241	0.763947186
845	0.8336798	0.9172	0.764651113
850	0.8246753	0.9103	0.750701926
855	0.8253968	0.86334	0.712598073
860	0.8154206	0.8	0.65233648
865	0.8329177	0.72848	0.606763886
870	0.8170103	0.6552	0.535305149
875	0.8105263	0.58016	0.470234938
880	0.8097826	0.5034	0.407644561
885	0.8096591	0.42523	0.344291339
890	0.7905604	0.3448	0.272585226
895	0.7975078	0.25704	0.204991405
900	0.8135594	0.175	0.142372895
905	0.8064516	0.11009	0.088782257
910	0.8015268	0.0621	0.049774814
915	0.7894737	0.043125	0.034046053
920	0.8398268	0.0276	0.02317922
925	0.8387097	0.015525	0.013020968
930	0.8292683	0.0069	0.005721951
935	0.8157895	0	0
940	0.8138298	0	0
945	0.852071	0	0
950	0.8048781	0	0
<b>SUM:</b>		40.17422213	
<b>Tnvg(SUM/NVG):</b>		0.824957748	(SPECTRAL
			TRANSMISSION
			COEFFICIENT)

# **SAMPLE**

**Aircraft:** N/A

**Part Name:** Sample, 5mm

**Manufactured:** N/A

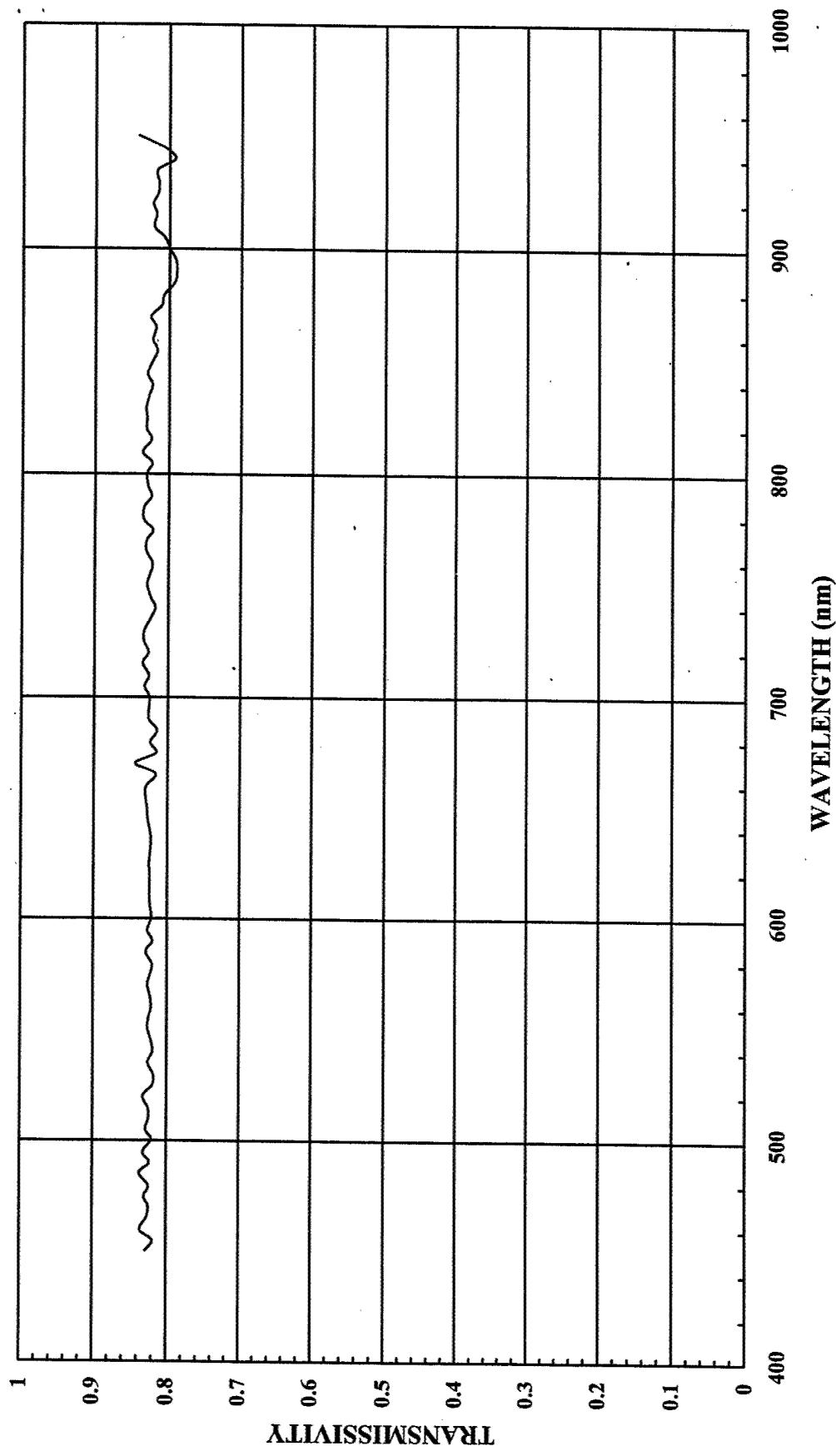
**S/N#** N/A

**Material Type:** Acrylic

**Construction:** N/A

**Coating:** N/A

SAMPLE (ACRYLIC, 5mm, NO SERIAL NUMBER) @ NORMAL  
 $T_{avg} = 83\%$



<u>SAMPLE, ACRYLIC, 5mm, NO S/N# @ NORMAL</u>			
<u>WAVELENGTH(nm)</u>	<u>SPECTRA- RADIOMETRIC READING</u>	<u>RELATIVE SPECTRAL SENSITIVITY "NVIS A"</u>	<u>NVG SPECTRAL RESPONSE</u>
450	0.8285714	0.0001	8.28571E-05
455	0.818584	0.0001125	9.20907E-05
460	0.8357589	0.000123	0.000102798
465	0.8266129	0.0001375	0.000113659
470	0.8241107	0.00015	0.000123617
475	0.8301527	0.00016172	0.000134252
480	0.8240741	0.000175	0.000144213
485	0.8369566	0.00019375	0.00016216
490	0.8229342	0.0002125	0.000174874
495	0.8322684	0.0002266	0.000185313
500	0.8205928	0.0002375	0.000194891
505	0.8285714	0.00027656	0.00022915
510	0.8244514	0.0003125	0.000257641
515	0.825	0.00034279	0.000282802
520	0.8324397	0.000375	0.000312165
525	0.8194805	0.00041875	0.000343157
530	0.817942	0.0004625	0.000378298
535	0.8255659	0.00050703	0.000418587
540	0.8195876	0.00055	0.000450773
545	0.8210784	0.00058359	0.000479173
550	0.8258823	0.000625	0.000516176
555	0.8251749	0.0007	0.000577622
560	0.8216341	0.000775	0.000636766
565	0.8224719	0.00085	0.000699101
570	0.8265193	0.000925	0.00076453
575	0.8230185	0.0014525	0.001195434
580	0.8201755	0.00198	0.001623947
585	0.8288888	0.0047175	0.003910283
590	0.8197612	0.0078	0.006394137
595	0.8265412	0.0114	0.00942257
600	0.8211462	0.015	0.012317193
605	0.8229572	0.026263	0.021613325
610	0.8240557	0.052	0.042850896
615	0.8238929	0.088388	0.072822246
620	0.8239061	0.175	0.144183568
625	0.8247864	0.43288	0.357033537
630	0.8234683	0.6138	0.505444843
635	0.8225324	0.67756	0.557315053
640	0.8237585	0.74448	0.613535331
645	0.8265504	0.82458	0.681556929
650	0.828215	0.8897	0.736862886
655	0.8299711	0.89654	0.74410229
660	0.8292181	0.9034	0.749115632
665	0.816156	0.91051	0.7431182
670	0.8440367	0.9172	0.774150461
675	0.8158458	0.92241	0.752544324
680	0.8237705	0.9276	0.764129516
685	0.8146167	0.93254	0.759662657
690	0.8256173	0.9379	0.774346466
695	0.8258504	0.9448	0.780263458
700	0.8251833	0.9517	0.785326947
705	0.8321759	0.9586	0.797723818
710	0.8261351	0.9655	0.797633439
715	0.8347921	0.97304	0.812286105
720	0.8267543	0.9793	0.809640486
725	0.8329571	0.9802	0.816464549
730	0.8327485	0.9828	0.818425226
735	0.8241758	0.98838	0.814598877
740	0.8178294	0.9931	0.812186377
745	0.8239896	0.99719	0.821674189

750	0.8288288	1	0.8288288
755	0.8250319	1	0.8250319
760	0.821608	1	0.821608
765	0.8301887	1	0.8301887
770	0.8299748	1	0.8299748
775	0.8213368	0.99814	0.819809114
780	0.8340081	0.9966	0.831172472
785	0.8335725	0.99543	0.829763074
790	0.8233533	0.9945	0.818824857
795	0.8283465	0.9938	0.823210752
800	0.830033	0.9931	0.824305772
805	0.8225539	0.9862	0.811202656
810	0.8358714	0.9793	0.818568862
815	0.8236331	0.97283	0.801254989
820	0.8306596	0.9655	0.802001844
825	0.830018	0.95515	0.792791693
830	0.8314815	0.9448	0.785583721
835	0.8269231	0.93402	0.772362714
840	0.8227091	0.9241	0.760265479
845	0.8295218	0.9172	0.760837395
850	0.8225108	0.9103	0.748731581
855	0.8163265	0.86334	0.704767321
860	0.8224299	0.8	0.65794392
865	0.8179551	0.72848	0.595863931
870	0.8247423	0.6552	0.540371155
875	0.8105263	0.58016	0.470234938
880	0.8070652	0.5034	0.406276622
885	0.7926136	0.42523	0.337043081
890	0.7905604	0.3448	0.272585226
895	0.7912773	0.25704	0.203389917
900	0.8	0.175	0.14
905	0.8064516	0.11009	0.088782257
910	0.8206107	0.0621	0.050959924
915	0.8178138	0.043125	0.03526822
920	0.8225108	0.0276	0.022701298
925	0.8156682	0.015525	0.012663249
930	0.8146341	0.0069	0.005620975
935	0.8157895	0	0
940	0.7925532	0	0
945	0.8047337	0	0
950	0.8414634	0	0
<b>SUM:</b>		40.18412307	
<b>T<sub>nvg</sub>(SUM/NVG):</b>		0.825161059	<b>(SPECTRAL TRANSMISSION COEFFICIENT)</b>

# **SAMPLE**

**Aircraft:** N/A

**Part Name:** Sample, 9mm

**Manufactured:** N/A

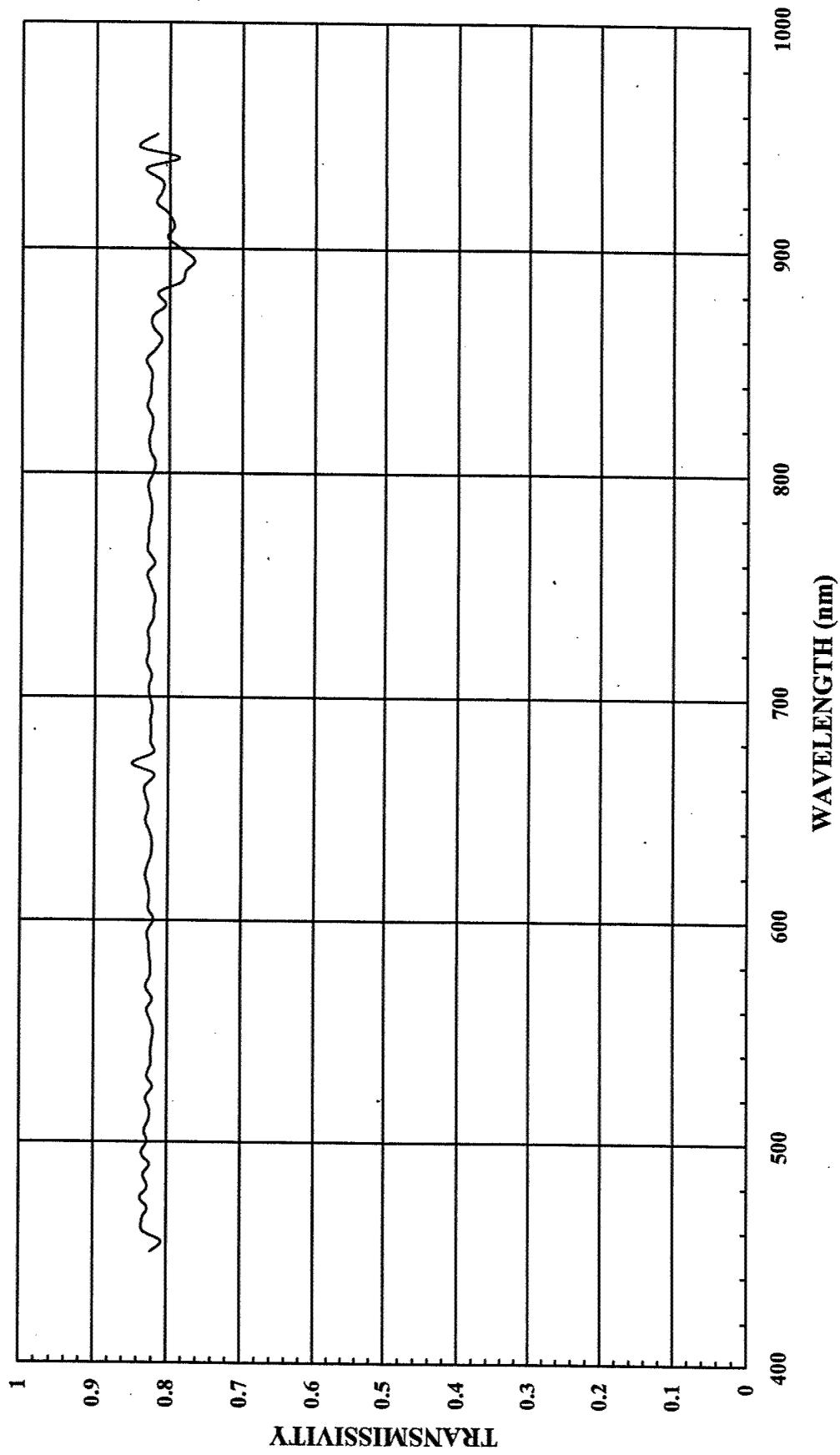
**S/N#** N/A

**Material Type:** Acrylic

**Construction:** N/A

**Coating:** N/A

SAMPLE (ACRYLIC, 9mm, NO SERIAL NUMBER) @ NORMAL  
 $T_{avg} = 82\%$



<u>SAMPLE, ACRYLIC, 9mm, NO S/N# @ NORMAL</u>					
<u>WAVELENGTH(nm)</u>	<u>SPECTRA- RADIOMETRIC READING</u>	<u>RELATIVE SPECTRAL SENSITIVITY "NVIS A"</u>	<u>NVG SPECTRAL RESPONSE</u>		
	450	0.8214285	0.0001	8.21429E-05	
455	0.8075221	0.0001125	9.08462E-05		
460	0.8316008	0.000123	0.000102287		
465	0.8323233	0.0001375	0.000114444		
470	0.826087	0.00015	0.000123913		
475	0.8358779	0.00016172	0.000135178		
480	0.8259259	0.000175	0.000144537		
485	0.8315217	0.00019375	0.000161107		
490	0.8229342	0.0002125	0.000174874		
495	0.8338658	0.0002266	0.000185669		
500	0.8268331	0.0002375	0.000196373		
505	0.8301587	0.00027656	0.000229589		
510	0.8244514	0.0003125	0.000257641		
515	0.8235294	0.00034279	0.000282298		
520	0.8284183	0.000375	0.000310657		
525	0.8194805	0.00041875	0.000343157		
530	0.8271768	0.0004625	0.000382569		
535	0.8215712	0.00050703	0.000416561		
540	0.8221649	0.00055	0.000452191		
545	0.8210784	0.00058359	0.000479173		
550	0.8188235	0.000625	0.000511765		
555	0.8228438	0.0007	0.000575991		
560	0.8273878	0.000775	0.000641226		
565	0.8202247	0.00085	0.000697191		
570	0.8287292	0.000925	0.000766575		
575	0.8230185	0.0014525	0.001195434		
580	0.8223684	0.00198	0.001628289		
585	0.8244444	0.0047175	0.003889316		
590	0.82519	0.0078	0.006436482		
595	0.8275862	0.0114	0.009434483		
600	0.8191699	0.015	0.012287549		
605	0.8258755	0.026263	0.021689968		
610	0.8250497	0.052	0.042902584		
615	0.8259526	0.088388	0.073004298		
620	0.8303095	0.175	0.145304163		
625	0.8269231	0.43288	0.357958472		
630	0.8224299	0.6138	0.504807473		
635	0.8215354	0.67756	0.556639526		
640	0.8247322	0.7448	0.614260543		
645	0.8304264	0.82458	0.684753001		
650	0.8262956	0.8897	0.735155195		
655	0.8299711	0.89654	0.74410229		
660	0.8312757	0.9034	0.750974467		
665	0.8189415	0.91051	0.745654425		
670	0.8486239	0.9172	0.778357841		
675	0.8201285	0.92241	0.75649473		
680	0.8237705	0.9276	0.764129516		
685	0.8235294	0.93254	0.767974107		
690	0.8240741	0.9379	0.772899098		
695	0.8217687	0.9448	0.776407068		
700	0.8251833	0.9517	0.785326947		
705	0.8263889	0.9586	0.7921764		
710	0.8228129	0.9655	0.794425855		
715	0.8293217	0.97304	0.806963187		
720	0.8267543	0.9793	0.809640486		
725	0.8261851	0.9802	0.809826635		
730	0.8280702	0.9828	0.813827393		
735	0.8205128	0.98838	0.810978441		
740	0.8204134	0.9931	0.814752548		
745	0.8187744	0.99719	0.816473644		

750	0.8249678	1	0.8249678
755	0.8288633	1	0.8288633
760	0.8190954	1	0.8190954
765	0.8289308	1	0.8289308
770	0.8274559	1	0.8274559
775	0.8277635	0.99814	0.82622386
780	0.8245614	0.9966	0.821757891
785	0.8235295	0.99543	0.81976597
790	0.8263473	0.9945	0.82180239
795	0.8283465	0.9938	0.823210752
800	0.8217822	0.9931	0.816111903
805	0.8192371	0.9862	0.807931628
810	0.8257191	0.9793	0.808626715
815	0.8271604	0.97283	0.804686452
820	0.8235294	0.9655	0.795117636
825	0.8227848	0.95515	0.785882902
830	0.8296297	0.9448	0.783834141
835	0.825	0.93402	0.7705665
840	0.8247011	0.9241	0.762106287
845	0.8232847	0.9172	0.755116727
850	0.8311688	0.9103	0.756612959
855	0.8185941	0.86334	0.70672503
860	0.8107476	0.8	0.64859808
865	0.8229427	0.72848	0.599497298
870	0.822165	0.6552	0.538682508
875	0.8052632	0.58016	0.467181498
880	0.8156425	0.5034	0.410594435
885	0.7840909	0.42523	0.333418973
890	0.7778761	0.3448	0.268516793
895	0.7663552	0.25704	0.196983941
900	0.7864407	0.175	0.137627123
905	0.8028674	0.11009	0.088387672
910	0.7938932	0.0621	0.049300768
915	0.8016195	0.043125	0.034569841
920	0.8181818	0.0276	0.022581818
925	0.8110599	0.015525	0.012591705
930	0.8097561	0.0069	0.005587317
935	0.831579	0	0
940	0.7872341	0	0
945	0.8402366	0	0
950	0.8170732	0	0
<b>SUM:</b>		40.10010251	
<b>T<sub>nv</sub>g(SUM/NVG):</b>		0.823435738	<b>(SPECTRAL</b>
			<b>TRANSMISSION</b>
			<b>COEFFICIENT)</b>

## REFERENCES

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F 1863-98 Standard Test Method for Measuring the Night Vision Goggle-Weighted Transmissivity of Transparent Parts. *Annual Book of ASTM Standards*; Vol. 15.03. Oct 2001.

## THE EFFECTS OF AIRCRAFT TRANSPARENCIES ON NIGHT VISION GOGGLE-MEDIATED VISUAL ACUITY

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Crew Systems Directorate  
Human Engineering Division  
Wright-Patterson AFB, OH

### ABSTRACT

*Night vision goggles (NVGs) are currently used in a wide variety of military aircraft that were not originally designed for NVGs. Likewise, the windscreens and canopies on these aircraft were not designed with NVGs in mind. Present day windscreens and canopies typically have one or more specialized coatings applied to them. These may be reasonably transparent for visible wavelengths but not so transparent for near infrared light to which the NVGs are sensitive. It was hypothesized that the major mechanism by which aircraft transparencies affect the operation of NVGs is through reduced light levels. This would mean that the key characteristic of interest for determining the effect of an aircraft transparency on the operation of the NVGs would be its transmission coefficient calculated using the spectral sensitivity of the NVGs. This hypothesis was tested by investigating visual acuity performance of trained observers viewing through NVGs for three levels of ambient illumination (1, 2 and 5 times starlight) and three levels of NVG-weighted windscreen transmissivities (58, 76 and 100%). In addition, two levels of contrast were included in the study (20*

*and 70% modulation contrast). Three trained observers determined the orientation of a Landolt C using a two-alternative, forced-choice step paradigm. A luminance-based model was developed to smoothly combine the effects of illumination level and transmission level for each contrast thus supporting the hypothesis. In addition, the results demonstrate the significant difference between individual observer's performance level and the increased difficulty (higher variability) of performance at lower contrast levels.*

### INTRODUCTION AND BACKGROUND

Night vision goggles provide observers with the ability to see very dimly illuminated nighttime scenes by amplifying ambient light from the red and near infrared spectral energy region (600 through 950 nm; see Fig. 1). Anything that reduces the light level getting to the NVGs will tend to reduce the output luminance while at the same time decreasing the signal-to-noise ratio. This, in turn, tends to reduce the visual acuity of observers using the NVGs. These effects are most apparent at very low ambient light levels such as starlight illumination

conditions. The basic hypothesis of this study is that it should not matter whether the light level is reduced by lowering the illumination level on the target area or by attenuating the light level getting to the NVGs by viewing through a transparency. This leads to the concept of equivalent illumination. For purposes of this study, equivalent illumination is the product of the actual illumination level and the transmission coefficient of the transparency through which one is viewing. As a specific example, the equivalent illumination for 2

times starlight actual illumination viewing through a 50% transmitting windscreens would be 1.0 starlight (2 times 0.5). This is the same equivalent illumination obtained for an actual illumination of 1 times starlight viewing through the NVGs with no intervening transparency (1 times 1.0). If the hypothesis were correct one would expect the visual acuity for these two conditions to be essentially the same (within the variability expected for human observations).

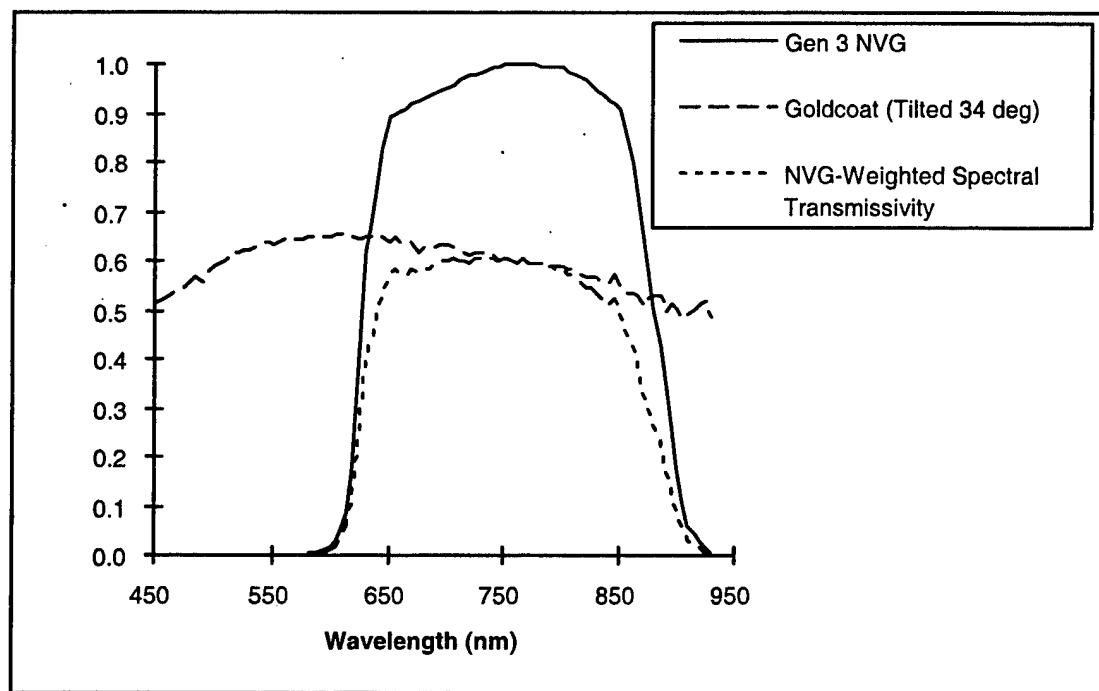


Figure 1. The relative value of a third-generation NVG, a gold-coated transparent sample (34 deg tilt) and its corresponding NVG-weighted spectral transmissivity plotted as a function of wavelength.

In order to determine how much an aircraft windscreens or canopy will reduce the light level by, it is necessary to measure or

calculate the NVG-weighted transmission coefficient ( $T_{NVG}$ ). This is done by using the spectral sensitivity of a given NVG<sup>1,2,3</sup>.

Equation 1 describes the calculation for NVG-weighted transmissivity.  $T_{NVG}$  equals the integral with respect to wavelength, of the transparent part's spectral transmissivity [ $P(\lambda)$ ] times the spectral energy distribution of the light source [ $S(\lambda)$ ] times the NVG spectral sensitivity [ $G(\lambda)$ ] divided by the integral with respect to wavelength, of the spectral energy distribution of the light source times the NVG spectral sensitivity. Since the specific spectral energy distribution of the light source in Equation 1 is typically not known for operational conditions (it depends on the spectral energy distribution of the illumination source on the scene and the spectral reflectivity of the various objects in the scene) the NVG-weighted transmission coefficient was calculated using  $S(\lambda) = 1$  for all wavelengths. This simplifies the equation and typically does not significantly affect the results for the vast majority of broadband reflectance distributions normally encountered. Figure 1 shows the spectral transmissivity curve for one of the gold-coated samples used in this study. The third-generation NVG sensitivity curve is plotted for reference.

$$T_{NVG} = \frac{\int_{450 \text{ nm}}^{950 \text{ nm}} P(\lambda) S(\lambda) G(\lambda) d\lambda}{\int_{450 \text{ nm}}^{950 \text{ nm}} S(\lambda) G(\lambda) d\lambda} \quad (1)$$

where:

- $T_{NVG}$  = NVG-weighted transmissivity
- $P(\lambda)$  = spectra radiometric scan through the transparent part
- $S(\lambda)$  = spectral energy distribution of the light source (equal to 1 for our calculations)

$G(\lambda)$  = spectral sensitivity of the night vision goggle

Undocumented reports from some aircrew in different aircraft indicated that some transparencies, such as gold-coated F-16 canopies, might cause a reduction in NVG visual acuity compared to uncoated transparencies. Investigation into the NVG-weighted transmission level of currently fielded F-16 canopies revealed that there are at least three different gold coatings and two different indium-tin-oxide coatings in use. It was therefore the objective of this study to investigate the effect of coated transparent parts that included the full range of NVG-weighted transmission coefficients that might be found in the field. Since we could not obtain samples of all of the different types of coated windscreens it was decided to use what samples we did have in such a way as to provide a fairly wide range of transmissivities. Two gold-coated sections of transparencies were available: one with a fairly light coating and one with a relatively heavy coating. In order to expand the range even further, viewing through the heavily coated sample was done at a tilted angle, which made the transmission coefficient even smaller.

## METHOD

### Participants

The three participants in this study were not naive subjects in the traditional sense but highly trained psychophysical observers, two males and one female, ranging in ages from 35 to 46 years.

### Apparatus and Stimuli

The tests utilized a new set of ITT Model F4949D (serial #3873) NVGs<sup>4</sup> that had P-43 phosphor image intensifier tubes and a measured gain<sup>5</sup> of about 6000. With the room lights off and the NVGs on, the observer first adjusted the interpupillary distance of the goggles. Then they adjusted the eyepiece lenses by looking at the dark ceiling with the goggles and focusing until the scintillation looked sharp. Objective lenses were focused by viewing a one-half moon illuminated, NVG resolution chart composed of square-wave gratings<sup>6</sup>.

All observations were made in a light tight room. The observer sat in a chair behind a table with their eyes 9.14 m (30 ft) from the stimulus easel. On the table was a fixture that held an aircraft transparency sample and a foam board visual field mask, which had a 15 cm high by 18 cm wide (6 by 7 in.) aperture. The observer held the NVGs but could rest his or her elbows on the table while looking through the hole and transparency at the stimulus. The goggles were powered using a regulated external power supply.

The stimuli were Landolt C's<sup>7</sup> printed using a high-resolution photo-grade laser printer. All of the C's (in each set) were consecutively numbered 1 through n for ease of use with the computer program (see *Procedure* section) during the study. After the study, the observers' data were converted to Snellen equivalents. The high contrast (70% Michelson) set consisted of 69 C's ranging from 20/19.1 to 20/200.5 Snellen acuity for the 9.14 m viewing distance. C's 1 through 48 increased by about 2 minutes-of-arc (MOA) per step and

C's 49 through 69 increased in about 2 to 4 MOA steps in order to insure a high upper range. The low contrast (20% Michelson) set consisted of 107 C's ranging from 20/19.1 to 20/236.8 Snellen acuity. For this set, C's 1 through 92 increased by about 2 MOA per step and C's 93 through 107 increased in about 2 to 4 MOA steps. The first stimulus presentation, as determined by the program, was always from the center of the set's range and all subsequent thresholds were found to be below this value.

The C's were mounted on 18 x 18 cm (7 x 7 in.) foam board. The letter and background were different gray levels, varied to achieve the two desired contrasts but maintain the same average reflectance. For presentation, the C was placed onto a larger surround board 61 x 61 cm (24 x 24 in.) that matched either the high or low contrast Landolt C background reflectance as appropriate. The background board was held on an easel and had a small ledge that held the letter C in the center. The ledge was invisible when viewed through NVGs. The C was then easily placed onto the ledge with the gap oriented either up or down.

The experimenter's station was to the side of the stimulus easel. The computer's electroluminescent, backlit liquid-crystal display was filtered and shrouded to eliminate any stray light from falling on the target pattern.

Three, precalibrated, 2856K incandescent lamps<sup>8</sup> were used to easily change to the different illumination levels. Apertures varied their intensity without affecting the color temperature. Illumination levels used

were: 1x starlight =  $3.4 \times 10^{-4}$  lx ( $3.2 \times 10^{-5}$  fc)<sup>9</sup>; 2x starlight =  $6.7 \times 10^{-4}$  lx ( $6.2 \times 10^{-5}$  fc); 5x starlight =  $1.8 \times 10^{-3}$  lx ( $1.7 \times 10^{-4}$  fc). A fourth lamp, set to about one-half moon illumination  $1.3 \times 10^{-1}$  lx ( $1.2 \times 10^{-2}$  fc) was used to illuminate an NVG resolution target<sup>6</sup> during pretest goggle focusing.

Three transmission conditions were included in this study: a tilted heavily gold-coated sample, a non-tilted lightly coated sample, and no intervening transparency (100% transmission, hereafter termed baseline or high  $T_{NVG}$ ). The  $T_{NVG}$  for the heavily gold-coated sample tilted to a 34 deg orientation was 58% (hereafter termed low  $T_{NVG}$ ). The untitled (normal) lightly gold-coated sample had 76% transmissivity (hereafter termed medium  $T_{NVG}$ ). This study used three different combinations of stimulus illumination, with three different levels of  $T_{NVG}$  coefficient to achieve nine total levels

of equivalent illumination. Table 1 summarizes the nine equivalent illumination levels derived from the different illumination and  $T_{NVG}$  coefficient combinations.

Testing was conducted within randomized blocks of the lighting conditions because the observer had to adapt to that level before the test. First, an illumination source was randomly selected. Within that lighting level, the observer was tested with a randomized order of stimulus contrasts and transparency samples. Two levels of contrast (20 and 70%), three levels of illumination and three levels of  $T_{NVG}$  yielded nine experimental conditions for high contrast letters and nine experimental conditions for low contrast. The visual acuity through the NVGs for trained observers was measured as a function of these nine equivalent illumination levels.

Table 1. The nine different equivalent illumination levels produced by all combinations of the three levels of stimulus illumination and three levels of transparency  $T_{NVG}$  coefficients.

MULTIPLES OF STARLIGHT	LOW $T_{NVG}$ coefficient $T_{NVG} = 58\%$	MEDIUM $T_{NVG}$ coefficient $T_{NVG} = 76\%$	HIGH $T_{NVG}$ coefficient $T_{NVG} = 100\%$
1x	0.58	0.76	1
2x	1.16	1.52	2
5x	2.9	3.8	5

#### Procedure

A portable computer executed a two-alternative, forced-choice Step Program adapted from Simpson<sup>10</sup>. The experimenter started the Step Program which asked for the

initial setup parameters: Landolt C upper and lower stimulus identification numbers (1 through 69 for high contrast or 1 through 107 for low contrast), confidence level (95%), number to criterion (5), maximum

total number of trials (50) and a data file name. Using a conservative 95% confidence level caused the program to require a few more trials before converging to threshold.

The proper stimulus surround was placed onto the easel, a 1x, 2x or 5x starlight lamp was energized and the transparency sample placed into the fixture. The observer then partially dark-adapted to the goggle output luminance for about 10 minutes. The Step Program instructed the experimenter to place a given numbered (size) Landolt C in an up or down, randomized position. The stimulus was blocked from the observer's view by the experimenter during placement onto the easel. The experimenter asked the observer if he or she was ready, unblocked the stimulus for about 4 seconds, and then blocked it again. The observer had to respond either "up" or "down". No feedback was ever given to the observer. The experimenter then removed the stimulus and entered the observer's response into the Step Program. Based on the response, the Step Program determined the next stimulus size and randomized its orientation. The procedure was repeated until criterion was reached or the maximum numbers of trials were met. All observers converged before reaching the maximum number of trials. This procedure averaged about 10 minutes

per experimental condition with five minute rests after each condition and additional rest after completion of each lighting condition.

## RESULTS

The study presented a total of 1015 stimuli to the three observers. Threshold criterion (5 correct responses at smallest, reliably seen gap size) was reached in 19 trials on the average, 10 being the fastest and 38 the slowest (see Fig. 2 for an example). Snellen acuity, which served as the dependent variable, was calculated from the viewing distance and the gap size of the Landolt C with the standard conversion that 20/20 Snellen acuity corresponds to a gap size of one minute of arc. Table 2 is a summary of the results for the high contrast Landolt C condition listing the Snellen acuity for each illumination/transparency combination for each trained observer and the average across observers. The equivalent illumination column is the fraction of starlight that was available to illuminate the target pattern after accounting for the transmission coefficient of the transparency. This value was calculated by multiplying the illumination level (1, 2, or 5 times starlight) by the transmission coefficient (0.58, 0.76, or 1.00) for each condition. Table 3 is a summary of the results for the low contrast condition.

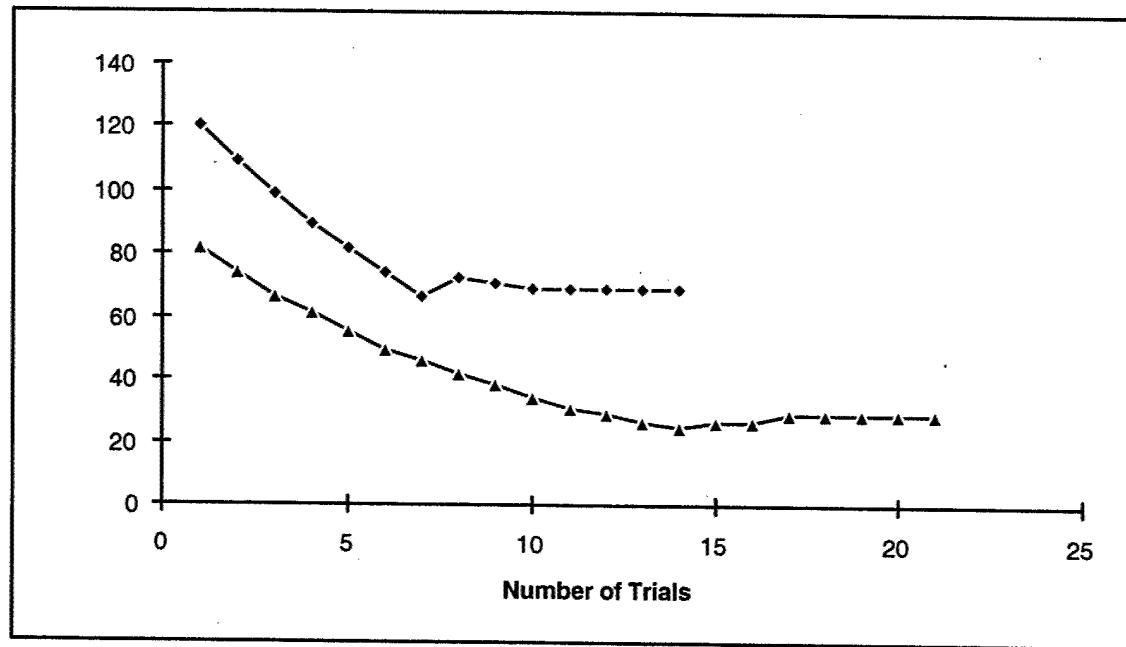


Figure 2. Typical Landolt C presentation sequences using the computer-based Step Program.  
 Table 2. Summary of high contrast (70%) stimuli data. All data are Snellen acuities (20/xx).

ILLUMINATION (X STARLIGHT)	$T_{NVG}$ COEFFICIENT	EQUIV ILLUM	OBSERVER 1	OBSERVER 2	OBSERVER 3	MEAN
1x	LOW	0.58	66.8	63.0	61.1	63.6
1x	MEDIUM	0.76	61.1	59.2	49.7	56.7
1x	HIGH	1	53.5	51.6	47.7	50.9
2x	LOW	1.16	51.6	57.3	47.7	52.2
2x	MEDIUM	1.52	49.7	47.7	43.9	47.1
2x	HIGH	2	45.8	43.9	36.3	42.0
5x	LOW	2.9	36.3	40.1	36.3	37.6
5x	MEDIUM	3.8	36.3	32.5	34.4	34.4
5x	HIGH	5	36.3	32.5	34.4	34.4

Table 3. Summary of low contrast (20%) stimuli data. All data are Snellen acuities (20/xx).

ILLUMINATION (X STARLIGHT)	$T_{NVG}$ COEFFICIENT	EQUIV ILLUM	OBSERVER 1	OBSERVER 2	OBSERVER 3	MEAN
1x	LOW	0.58	114.6	103.1	149.0	122.2
1x	MEDIUM	0.76	128.0	105.0	126.1	119.7
1x	HIGH	1	108.9	99.3	107.0	105.1
2x	LOW	1.16	114.6	84.0	122.2	106.9
2x	MEDIUM	1.52	112.7	108.9	82.1	101.2
2x	HIGH	2	105.0	99.3	70.7	91.7
5x	LOW	2.9	101.2	93.6	74.5	89.8
5x	MEDIUM	3.8	68.8	87.9	68.8	75.2
5x	HIGH	5	47.7	74.5	61.1	61.1

## DISCUSSION

Although none of the combination of conditions (illumination and transmission coefficient) permitted a direct test of the equivalent illumination hypothesis, it was possible to graph the Snellen acuity results against the equivalent illumination to see if it would produce a reasonably smooth, monotonically decreasing curve. This is the type of curve that would be expected since; in general, visual acuity improves (Snellen acuity value is smaller) as light level to the eye increases<sup>11</sup>. Figures 3 and 4 show these graphs for the high contrast and low contrast conditions, respectively.

The graphs of Figures 3 and 4 include all of the individual observer data in addition to a dashed line that corresponds to the average for the three observers for each equivalent illumination condition. The high contrast graph of Figure 3 demonstrates a very clear pattern, although it is apparent that there is a certain amount of observer variability and differences between observers. Based on visual inspection of the graph in Figure 3, a

curve fit was applied using a simple reciprocal model. The general form of the model equation was:

$$S = K + \frac{M}{E} \quad (2)$$

where:

$S$  = Snellen acuity (20/xx)

$K$  = constant (empirically determined by least squares fit)

$M$  = proportionality constant (empirically determined)

$E$  = equivalent illumination

Table 4 is a summary of the model fit (Equation 2) for both the high contrast and low contrast Landolt C. The model is shown in Figures 3 and 4 as a solid line. The model fits reasonably well for the high contrast condition ( $r = 0.981$ ) and not too badly for the low contrast condition ( $r = 0.912$ ) given that human observations are involved. It should be noted that this fit was done for a relatively small range of illuminations (0.58 to 5.0 times starlight) and

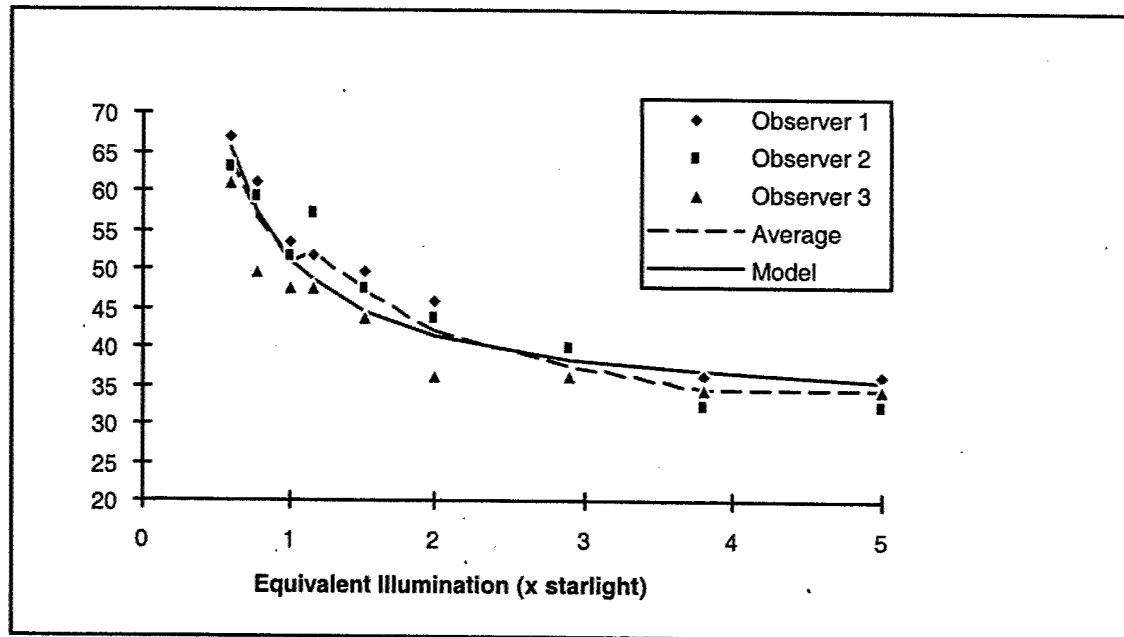


Figure 3. Plot of Snellen acuity as a function of starlight illumination for high contrast Landolt C stimuli (data from Table 2).

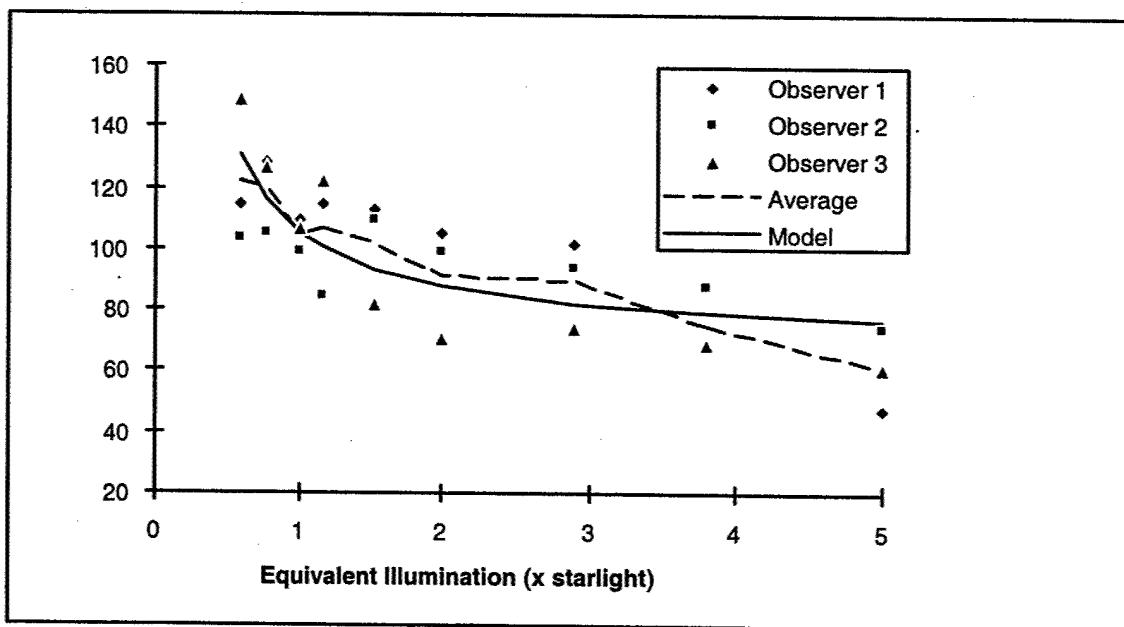


Figure 4. Plot of Snellen acuity as a function of starlight illumination for low contrast Landolt C stimuli (data from Table 3).

is therefore only valid for this range. It is possible the basic model (Equation 2) may still hold up for a greater range of illuminations but that has not yet been tested.

Table 4. Summary of model fit to data.

CONDITION	K	M	CORR (r)
70% CONTRAST	31.6	19.6	0.981
20% CONTRAST	70.0	35.3	0.912

The results shown in Figures 3 and 4 and the correlations in Table 4 support the validity of the hypothesis regarding using equivalent illumination and the  $T_{NVG}$  as a means of assessing the quality of aircraft transparencies with respect to NVGs. It is possible to use Equation 2 with the appropriate coefficients from Table 4 to reasonably predict the impact on visual acuity of a specific windscreens or canopy if its  $T_{NVG}$  value is known.

There is, however, an implicit assumption that must be addressed before applying the model presented herein. These results and the model presented assume the transparency has a very low haze value<sup>12</sup>. Haze is a phenomenon caused by light scattering from materials within the transparency or from micro-scratches on the surface of the transparency (usually due to repeated cleaning). The effect of haze is to lower the contrast of objects viewed through the transparency, which, in turn, would reduce visual performance (Snellen acuity). The implicit assumption was that the transparencies employed in this study had very little or no haze. The two transparencies used in this study were measured<sup>13</sup> and were found to have fairly low values of haze; 1.7% for the medium transmission and 2.4% for the low transmission transparency samples. If haze is present, then the model needs to be modified to include the loss in visual acuity due to contrast reduction. If haze is not present, then the contrast of objects viewed through a transparency remains the same no matter what the transmission coefficient is; only the apparent luminance of the object is affected. Future work in this area will address the haze issue.

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